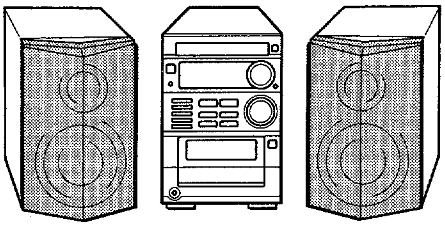
aiwa

aiwa SERVICE

XR-M35



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM: 2ZM-1 R6
- BASIC CD MECHANISM: 3ZG-3 E1

- TYPE: HR,HE,EZ,K

SERVICE MANUAL

S/M Code No. 09-985-257-9O3

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SPECIFICATIONS

HE, HR MODELS

Main unit XR-M35

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

Amplifier section

Power output	Rated 22W + 22W (6 ohms, T.H.D. 1%, 1kHz) Reference 30W + 30W (6 ohms, T.H.D. 10%, 1kHz) 15kHz, with no more than 1% Total Harmonic Distortion
Total harmonic distortion	0.08 % (15 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 400 mV MD: 400 mV
Outputs	SUPER WOOFER: 1.4 V SPEAKERS: accept speakers of 6 ohms or more LINE OUT: 1.4 V PHONES (stereo minijack): accepts headphones of 16 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	62 dB (Dolby B NR ON, CrO_2 tape peak level)
Recording system	AC bias
Heads	Deck: Recording/playback/ erase head × 1

Compact disc player section

Laser	Semiconductor laser ($\lambda = 780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	94 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

Speaker system SX-M35

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 130 mm cone type Tweeter: 60 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	155 × 260 × 245 mm
Weight	2.5 kg

General

Power requirements	120V/220-240V AC switchable, 50/60Hz
Power consumption	70 W
Dimensions of main unit (W × H × D)	175 × 260 × 277 mm
Weight of main unit	4.3 kg

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound,Inc.
  Under license from BBE Sound,Inc.

K, EZ MODELS

Main unit XR-M35

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

MW tuner section

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

LW tuner section

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

Amplifier section

K MODEL:

Power output	Rated: 21 W + 21 W (6 ohms, T.H.D. 1%, 1kHz/DIN 45500) Reference: 30 W + 30 W (6 ohms, T.H.D. 10%, 1kHz/DIN 45324)
Inputs	VIDEO/AUX: 400 mV MD: 400 mV
Outputs	SUPER WOOFER: 1.4 V SPEAKERS: accept speakers of 6 ohms or more LINE OUT: 1.4 V PHONES (stereo minijack): accepts headphones of 16 ohms or more

EZ MODEL:

Power output	Rated: 32 + 32 W (6 ohms, T.H.D. 1%, 1kHz/DIN 45500) Reference: 41 + 41 W (6 ohms, T.H.D. 10%, 1kHz/DIN 45324)
Inputs	VIDEO/AUX: 400 mV MD: 400 mV
Outputs	SUPER WOOFER: 1.4 V SPEAKERS: accept speakers of 6 ohms or more LINE OUT: 1.4 V PHONES (stereo minijack): accepts headphones of 16 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO$_2$ tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	62 dB (Dolby B NR ON, CrO$_2$ tape peak level)
Recording system	AC bias
Heads	Deck: Recording/playback/ erase head × 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	94 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

Speaker system SX-M35

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 130 mm cone type Tweeter: 60 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	155 × 260 × 245 mm
Weight	2.5 kg

General

K MODEL:

Power requirements	230 V AC, 50 Hz
Power consumption	70 W
Dimensions of main unit (W × H × D)	175 × 260 × 277 mm
Weight of main unit	4.3 kg

EZ MODEL:

Power requirements	230 V AC, 50 Hz
Power consumption	85 W
Dimensions of main unit (W × H × D)	175 × 260 × 277 mm
Weight of main unit	4.3 kg

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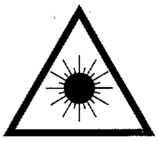
  "DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound,Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

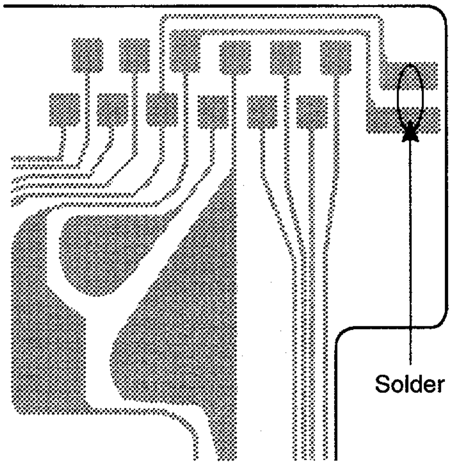
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-446-010		C-IC,LA9241ML
	87-020-454-010		IC,DN6851
	87-A20-187-010		IC,LC78622E
	87-A20-157-010		IC,TA2092N
	87-001-536-010		IC,NJM78M05FA
	87-001-982-010		IC,TA7291S
	88-CE3-601-010		C-IC,LC866448W
	87-NF8-614-010		IC,SPS-442-1-W
	87-A20-455-010		IC,HA12211
	87-A20-355-010		IC,CXA1553P
	87-070-289-040		IC,BU 2092F
	87-017-804-010		IC,BU4052BCP
	87-001-607-080		IC,NJM4558M
	87-A20-056-010		IC,BA3880S
	87-A20-715-010		IC,M62439SP
	87-017-915-080		IC,BU4094BCF
	86-NFZ-655-010		IC,LC72131D(Z)
	87-A20-438-010		IC,LA1837<HE,HR>
	87-A20-913-010		IC,LA1837NL<K,EZ>
	87-A20-440-040		C-IC,BU1920FS<EZ>
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-239-080		TR,DTC114TK (0.2W)
	87-026-297-080		TR,DTA144TK
	89-109-521-080		TR,2SA952 (0.6W)
	89-318-155-080		TR,2SC1815 (0.4W)
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-083-080		TR,CSD1489B
	87-026-609-080		TR,KTA1266GR
	87-A30-152-080		TR,2SC5395F
	87-A30-105-080		C-TR,RT1P 441C
	87-A30-075-080		C-TR,2SA1235F
	87-A30-076-080		C-TR,2SC3052F
	87-A30-112-080		TR,C2N5551
	87-A30-215-010		TR,2SD2025
	87-A30-214-010		TR,2SB1344
	87-A30-106-070		C-TR,CMBT5551
	87-A30-107-070		C-TR,CMBT5401
	87-A30-087-080		C-FET,2SK2158
	87-A30-047-080		TR,CSD655E
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-159-080		C-TR,KTA1298Y
	87-A30-071-080		C-TR,RT1N 144C
	87-A30-084-080		TR,CSB1058B
	87-A30-072-080		C-TR,RT1P 144C
	89-406-555-080		TR,2SD655 (0.5W)
	87-026-210-080		CHIP-TR,DTC144EK
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-073-080		C-TR,RT1N 141C<EZ>
	89-505-434-540		C-FET,2SK543(4/5)<K,EZ>
	87-A30-086-070		C-TR,CSD1306E<K,EZ>
DIODE			
	87-A40-291-080		DIODE,1N4148 (CPT)
	87-070-178-090		DIODE,1N5402-BD54
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-312-080		ZENER,DZ33M
	87-070-345-080		DIODE,IN4148
	87-A40-308-080		ZENER,DZ10M
	87-A40-304-080		ZENER,DZ6.2M
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-020-339-080		CHIP DIODE,1SS226
	87-A40-292-080		ZENER,DZ2.7L
	87-A40-234-080		ZENER,MTZJ5.6A
MAIN C.B			
C101	87-A10-627-090		CAP,E 2200-50 M SMG
C104	87-A10-627-090		CAP,E 2200-50 M SMG
C105	87-012-140-080		CAP 470P
C106	87-010-408-040		CAP,E 47-50 SME
C107	87-010-384-040		CAP,E 100-25 SME
C108	87-010-381-080		CAP, ELECT 330-16V
C113	87-010-403-080		CAP, ELECT 3.3-50V
C207	87-010-546-040		CAP,E 0.33-50
C208	87-010-546-040		CAP,E 0.33-50
C209	87-010-186-080		CAP,CHIP 4700P
C210	87-010-186-080		CAP,CHIP 4700P
C211	87-010-403-040		CAP,E 3.3-50 SME
C212	87-010-403-040		CAP,E 3.3-50 SME
C213	87-010-408-040		CAP,E 47-50 SME
C214	87-010-408-040		CAP,E 47-50 SME
C217	87-010-195-080		C-CAP,S 0.068-25 F
C218	87-010-195-080		C-CAP,S 0.068-25 F
C219	87-010-544-080		CAP, ELECT 0.1-50V
C220	87-010-544-080		CAP, ELECT 0.1-50V
C221	87-010-187-080		C-CAP,S 5600P-50 B
C222	87-010-187-080		C-CAP,S 5600P-50 B
C227	87-010-408-040		CAP,E 47-50 SME
C229	87-010-322-080		C-CAP,S 100P-50 CH
C230	87-010-322-080		C-CAP,S 100P-50 CH
C235	87-012-368-080		C-CAP,S 0.1-50 F
C236	87-012-368-080		C-CAP,S 0.1-50 F
C237	87-010-182-080		C-CAP,S 2200P-50 B
C261	87-010-197-080		CAP, CHIP 0.01 DM
C281	87-010-184-080		CHIP CAPACITOR 3300P(K)
C282	87-010-184-080		CHIP CAPACITOR 3300P(K)
C283	87-010-197-080		CAP, CHIP 0.01 DM<K,EZ>
C284	87-018-134-080		CAP, TC-U 0.01-16<K,EZ>
C285	87-018-125-080		CAP, TC-U 330P-50 K B<K,EZ>
C286	87-018-125-080		CAP, TC-U 330P-50 K B<K,EZ>
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C315	87-010-181-080		CAP,CHIP S 1800P
C316	87-010-181-080		CAP,CHIP S 1800P
C317	87-012-142-080		CAP, S 0.33-16
C318	87-012-142-080		CAP, S 0.33-16
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-010-178-080		CHIP CAP 1000P
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C360	87-010-183-080		C-CAP,S 2700P-50 B
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C371	87-010-179-080		CAP,CHIP S B1200P
C372	87-010-179-080		CAP,CHIP S B1200P
C373	87-010-179-080		CAP,CHIP S B1200P
C374	87-010-179-080		CAP,CHIP S B1200P
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		CAP, CHIP 0.01 DM
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		CAP, CHIP 0.01 DM
C384	87-010-402-080		CAP, ELECT 2.2-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C388	87-010-154-080		CAP CHIP 10P
C399	87-010-407-080		CAP, ELECT 33-50V
C506	87-010-384-080		CAP, ELECT 100-25V
C521	87-010-401-080		CAP, ELECT 1-50V
C522	87-010-401-080		CAP, ELECT 1-50V
C523	87-012-154-080		C-CAP,S 150P-50 CH
C524	87-012-154-080		C-CAP,S 150P-50 CH
C525	87-012-154-080		C-CAP,S 150P-50 CH
C526	87-012-154-080		C-CAP,S 150P-50 CH
C527	87-010-401-080		CAP, ELECT 1-50V
C528	87-010-401-080		CAP, ELECT 1-50V
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-381-080		CAP, ELECT 330-16V
C535	87-010-197-080		CAP, CHIP 0.01 DM
C540	87-010-196-080		CHIP CAPACITOR,0.1-25
C541	87-010-196-080		CHIP CAPACITOR,0.1-25
C542	87-010-405-080		CAP, ELECT 10-50V
C561	87-010-180-080		C-CER 1500P
C562	87-010-180-080		C-CER 1500P
C581	87-010-404-080		CAP, ELECT 4.7-50V
C582	87-010-404-080		CAP, ELECT 4.7-50V
C601	87-010-178-080		CHIP CAP 1000P
C602	87-010-178-080		CHIP CAP 1000P
C603	87-010-401-080		CAP, ELECT 1-50V
C604	87-010-401-080		CAP, ELECT 1-50V
C605	87-010-260-080		CAP, ELECT 47-25V
C606	87-010-101-080		CAP, ELECT 220-16
C607	87-010-188-080		CAP,CHIP 6800P
C608	87-010-188-080		CAP,CHIP 6800P
C609	87-012-140-080		CAP 470P
C610	87-012-140-080		CAP 470P
C611	87-010-197-080		CAP, CHIP 0.01 DM
C612	87-010-197-080		CAP, CHIP 0.01 DM
C613	87-010-195-080		C-CAP,S 0.068-25 F
C614	87-010-195-080		C-CAP,S 0.068-25 F
C615	87-010-404-080		CAP, ELECT 4.7-50V
C616	87-010-404-080		CAP, ELECT 4.7-50V
C617	87-010-404-080		CAP, ELECT 4.7-50V
C618	87-010-404-080		CAP, ELECT 4.7-50V
C620	87-010-234-080		CAP 47-16
C621	87-010-196-080		CHIP CAPACITOR,0.1-25
C622	87-010-322-080		C-CAP,S 100P-50 CH
C623	87-010-401-080		CAP, ELECT 1-50V
C624	87-010-401-080		CAP, ELECT 1-50V
C633	87-010-213-080		C-CAP,S 0.015-50 B
C634	87-010-213-080		C-CAP,S 0.015-50 B
C635	87-010-400-080		CAP, ELECT 0.47-50V
C636	87-010-400-080		CAP, ELECT 0.47-50V
C637	87-010-400-080		CAP, ELECT 0.47-50V
C638	87-010-400-080		CAP, ELECT 0.47-50V
C639	87-010-408-080		CAP, ELECT 47-50V
C640	87-010-408-080		CAP, ELECT 47-50V
C641	87-010-401-080		CAP, ELECT 1-50V
C642	87-010-401-080		CAP, ELECT 1-50V
C643	87-010-154-080		CAP CHIP 10P

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C701	87-010-381-080		CAP, ELECT 330-16V
C702	87-010-404-080		CAP, ELECT 4.7-50V
C703	87-010-197-080		CAP, CHIP 0.01 DM
C704	87-010-197-080		CAP, CHIP 0.01 DM
C709	87-010-322-080		C-CAP,S 100P-50 CH
C711	87-010-263-080		CAP, ELECT 100-10V
C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C713	87-010-197-080		CAP, CHIP 0.01 DM
C714	87-010-197-080		CAP, CHIP 0.01 DM
C715	87-010-322-080		C-CAP,S 100P-50 CH<K,EZ>
C721	87-010-312-080		C-CAP,S 15P-50 CH
C722	87-010-312-080		C-CAP,S 15P-50 CH
C723	87-010-178-080		CHIP CAP 1000P
C725	87-010-178-080		CHIP CAP 1000P
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP, ELECT 220-10V
C755	87-010-197-080		CAP, CHIP 0.01 DM
C756	87-010-197-080		CAP, CHIP 0.01 DM
C757	87-010-318-080		C-CAP,S 47P-50 CH
C758	87-010-149-080		C-CAP,S 5P-50 CH
C761	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C762	87-010-197-080		CAP, CHIP 0.01 DM
C763	87-010-194-080		CAP, CHIP 0.047
C765	87-010-197-080		CAP, CHIP 0.01 DM
C766	87-010-197-080		CAP, CHIP 0.01 DM
C767	87-010-405-080		CAP, ELECT 10-50V
C768	87-010-197-080		CAP, CHIP 0.01 DM
C769	87-010-408-080		CAP, ELECT 47-50V
C770	87-015-821-080		C-CAP 0.047
C771	87-010-407-080		CAP, ELECT 33-50V
C772	87-010-194-080		CAP, CHIP 0.047
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP, ELECT 100-10V
C775	87-010-404-080		CAP, ELECT 4.7-50V
C776	87-010-197-080		CAP, CHIP 0.01 DM
C777	87-010-400-080		CAP, ELECT 0.47-50V
C778	87-010-401-080		CAP, ELECT 1-50V
C779	87-010-401-080		CAP, ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP, ELECT 10-50V
C782	87-010-405-080		CAP, ELECT 10-50V
C783	87-010-197-010		CAP, S 0.01-25
C784	87-010-197-080		CAP, CHIP 0.01 DM
C785	87-010-403-080		CAP, ELECT 3.3-50V
C786	87-010-403-080		CAP, ELECT 3.3-50V
C787	87-010-184-080		CHIP CAPACITOR 3300P(K)<HE,HR>
C787	87-010-186-080		CAP,CHIP 4700P<K,EZ>
C788	87-010-184-080		CHIP CAPACITOR 3300P(K)<HE,HR>
C788	87-010-186-080		CAP,CHIP 4700P<K,EZ>
C789	87-010-179-080		CAP,CHIP S B1200P
C790	87-010-179-080		CAP,CHIP S B1200P
C791	87-010-405-080		CAP, ELECT 10-50V
C793	87-012-156-080		C-CAP,S 220P-50 CH<EZ>
C793	87-010-181-080		CAP,CHIP S 1800P<K>
C793	87-010-178-080		CHIP CAP 1000P<HE,HR,K>
C794	87-010-403-080		CAP, ELECT 3.3-50V
C795	87-010-596-080		CAP, S 0.047-16
C796	87-010-406-080		CAP, ELECT 22-50
C797	87-010-180-080		C-CER 1500P
C798	87-010-180-080		C-CER 1500P
C799	87-010-194-080		CAP, CHIP 0.047
C812	87-010-197-080		CAP, CHIP 0.01 DM
C814	87-010-197-080		CAP, CHIP 0.01 DM
C820	87-010-408-080		CAP, ELECT 47-50V
C821	87-010-197-080		CAP, CHIP 0.01 DM
C822	87-010-197-080		CAP, CHIP 0.01 DM
C823	87-010-197-080		CAP, CHIP 0.01 DM
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-010-197-080		CAP, CHIP 0.01 DM<EZ>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C861	87-012-156-080		C-CAP,S 220P-50 CH<EZ>
C862	87-012-156-080		C-CAP,S 220P-50 CH<EZ>
C863	87-012-140-080		CAP 470P<EZ>
C864	87-010-405-080		CAP, ELECT 10-50V<EZ>
C865	87-010-196-080		CHIP CAPACITOR,0.1-25<EZ>
C866	87-010-405-080		CAP, ELECT 10-50V<EZ>
C867	87-010-197-080		CAP, CHIP 0.01 DM<EZ>
C868	87-010-316-080		C-CAP,S 33P-50 CH<EZ>
C869	87-010-314-080		C-CAP,S 22P-50V<EZ>
C940	87-010-197-080		CAP, CHIP 0.01 DM<K,EZ>
C942	87-010-151-080		C-CAP,S 7P-50 CH<K,EZ>
C947	87-010-197-080		CAP, CHIP 0.01 DM<K,EZ>
C949	87-014-049-080		CAP,PP 470P-100 J<K,EZ>
C952	87-010-197-080		CAP, CHIP 0.01 DM<K,EZ>
C957	87-010-311-080		CAP 12P<K,EZ>
C958	87-010-197-080		CAP, CHIP 0.01 DM<K,EZ>
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-010-152-080		C-CAP,S 8P-50 CH<HE,HR>
C962	87-010-401-080		CAP, ELECT 1-50V<K,EZ>
CF801	87-008-423-010		CERAMIC FILTER, SFE10.7<K,EZ>
CF801	87-008-261-010		FILTER, SFE10.7MA5-A<HE,HR>
CF802	82-785-747-010		CF MS2 GHY R<K,EZ>
CF802	87-008-261-010		FILTER, SFE10.7MA5-A<HE,HR>
⚠F201	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
⚠F202	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
FFE801	A8-6ZA-19C-170		6ZA-1 YFEENC<K,EZ>
FFE801	A8-8ZA-193-070		8ZA-1 YFEUNC<HE,HR>
J201	87-A60-420-010		JACK,3.5 ST (MSC)
J202	87-099-801-010		JACK,PIN 1P BLK
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J501	82-MA2-631-010		JACK PIN 4P RVS
J502	80-MT3-616-010		JACK,PIN 2P
J801	87-033-230-010		TERMINAL,ANT AJ-2016<K,EZ>
J801	87-033-239-010		TERMINAL,HSP-154V-2<HE,HR>
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L770	87-005-847-080		COIL,2.2UH(CECS)
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)
L791	87-A50-027-010		COIL,1 POLE MPX(TOK)<K,EZ>
L791	87-A50-209-010		COIL,1POLE MPX(MIT)<HE,HR>
L792	87-A50-027-010		COIL,1 POLE MPX(TOK)<K,EZ>
L792	87-A50-209-010		COIL,1POLE MPX(MIT)<HE,HR>
L832	86-NFZ-694-080		COIL,2.2UH K CECS
L850	87-005-847-080		COIL,2.2UH(CECS)<EZ>
L941	87-A50-020-010		COIL,ANT LW(COI)<K,EZ>
L942	87-A50-019-010		COIL,OSC LW(COI)<K,EZ>
L981	87-NF4-650-010		COIL,AM PACK 4N(TOK)<HE,HR>
L981	87-NF4-651-010		COIL,AM PACK2N(TOM)<K,EZ>
R223	87-A00-258-080		RES,M/F 0.22-1W J
R224	87-A00-258-080		RES,M/F 0.22-1W J
R249	87-A00-258-080		RES,M/F 0.22-1W J
R250	87-A00-258-080		RES,M/F 0.22-1W J
SFR303	87-A90-557-080		SFR,33K H HOKU
SFR304	87-A90-557-080		SFR,33K H HOKU
SFR305	87-A90-637-080		SFR,47K H RH0638C LG
SFR306	87-A90-637-080		SFR,47K H RH0638C LG
SFR351	87-A90-637-080		SFR,47K H RH0638C LG
SFR352	87-A90-637-080		SFR,47K H RH0638C LG
TC942	87-011-221-080		CAP, TRIMMER 30P<K,EZ>
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X850	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309<EZ>

FR C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C200	87-010-312-080		C-CAP,S 15P-50 CH
C202	87-010-316-080		C-CAP,S 33P-50 CH
C205	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C206	87-A10-189-040		CAP,E 220-10
C221	87-010-405-040		CAP,E 10-50
C222	87-010-178-080		CHIP CAP 1000P
C241	87-010-071-040		CAP,E 1-50 5L
C242	87-A10-116-040		CAP,E 330-6.3 GAS
C243	87-010-196-080		CHIP CAPACITOR,0.1-25
C245	87-010-264-040		CAP,E 100-10 5L
C246	87-010-197-080		CAP, CHIP 0.01 DM
C247	87-010-067-040		CAP,E 0.1-50 5L
C248	87-018-132-080		CAP, CER 2200P-16V
C311	87-010-421-040		CAP,E 4.7-50 5L
C312	87-010-421-040		CAP,E 4.7-50 5L
C313	87-010-408-080		CAP, ELECT 47-50V
C521	87-015-819-080		CAPACITOR,0.01
C522	87-010-322-080		C-CAP,S 100P-50 CH
CN401	88-802-091-420		CONN ASSY,9P RED
D503	87-A40-276-080		LED,SML1816W UMB/GRN
D505	87-A40-276-080		LED,SML1816W UMB/GRN
D507	87-A40-276-080		LED,SML1816W UMB/GRN
D509	87-A40-276-080		LED,SML1816W UMB/GRN
D511	87-A40-276-080		LED,SML1816W UMB/GRN
D513	87-001-161-080		LED SEL2410E
D514	87-001-161-080		LED SEL2410E
D515	87-001-161-080		LED SEL2410E
D516	87-001-161-080		LED SEL2410E
D517	87-001-161-080		LED SEL2410E
D518	87-001-161-080		LED SEL2410E
FL301	88-CE3-602-010		FL,11BT-162GK
L201	87-A50-052-010		COIL,CLOCK 5.76MHZ T1
S301	87-A90-696-080		SW,TACT TS2103-03-430
S302	87-A90-696-080		SW,TACT TS2103-03-430
S303	87-A90-696-080		SW,TACT TS2103-03-430
S304	87-A90-696-080		SW,TACT TS2103-03-430
S305	87-A90-696-080		SW,TACT TS2103-03-430
S306	87-A90-696-080		SW,TACT TS2103-03-430
S307	87-A90-696-080		SW,TACT TS2103-03-430
S321	87-A90-696-080		SW,TACT TS2103-03-430
S322	87-A90-696-080		SW,TACT TS2103-03-430
S323	87-A90-696-080		SW,TACT TS2103-03-430
S324	87-A90-696-080		SW,TACT TS2103-03-430
S325	87-A90-696-080		SW,TACT TS2103-03-430
S326	87-A90-696-080		SW,TACT TS2103-03-430
S327	87-A90-696-080		SW,TACT TS2103-03-430
S328	87-A90-696-080		SW,TACT TS2103-03-430
S371	87-A90-085-010		SW,RTRY EC16B 24204
S372	87-A90-535-010		SW,RTRY EC16B24304

CD C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	84-ZG1-244-310		CABI,OPTICAL
C1	87-010-403-080		CAP, ELECT 3.3-50V
C2	87-010-197-080		CAP, CHIP 0.01 DM
C3	87-010-263-080		CAP, ELECT 100-10V
C4	87-010-248-080		CAP, ELECT 220-10V
C5	87-010-197-080		CAP, CHIP 0.01 DM
C6	87-010-374-080		CAP, ELECT 47-10V
C7	87-012-349-080		C-CAP,S 1000P-50 CH
C8	87-010-198-080		CAP, CHIP 0.022
C9	87-010-263-080		CAP, ELECT 100-10V
C10	87-010-263-080		CAP, ELECT 100-10V
C12	87-010-401-080		CAP, ELECT 1-50V
C13	87-010-197-080		CAP, CHIP 0.01 DM
C14	87-010-405-080		CAP, ELECT 10-50V
C16	87-010-545-080		CAP, ELECT 0.22-50V
C17	87-012-349-080		C-CAP,S 1000P-50 CH
C18	87-010-213-080		C-CAP,S 0.015-50 B
C20	87-010-193-080		CHIP CAPACITOR,0.033

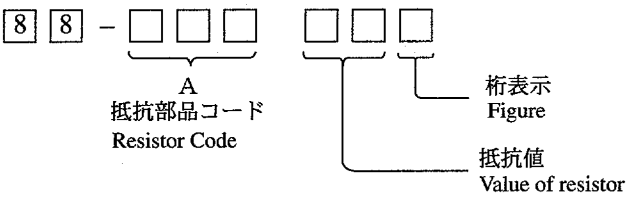
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C23	87-010-992-080		C-CAP,S 0.047-25 B
C29	87-010-186-080		CAP,CHIP 4700P
C30	87-012-156-080		C-CAP,S 220P-50 CH
C31	87-010-545-080		CAP, ELECT 0.22-50V
C32	87-010-374-080		CAP, ELECT 47-10V
C33	87-010-401-080		CAP, ELECT 1-50V
C34	87-010-182-080		C-CAP,S 2200P-50 B
C35	87-010-197-080		CAP, CHIP 0.01 DM
C36	87-010-374-080		CAP, ELECT 47-10V
C37	87-010-404-080		CAP, ELECT 4.7-50V
C38	87-010-196-080		CHIP CAPACITOR,0.1-25
C39	87-012-349-080		C-CAP,S 1000P-50 CH
C40	87-010-147-080		C-CAP,S 3P-50 CH
C42	87-010-314-080		C-CAP,S 22P-50V
C45	87-010-196-080		CHIP CAPACITOR,0.1-25
C46	87-010-196-080		CHIP CAPACITOR,0.1-25
C47	87-010-196-080		CHIP CAPACITOR,0.1-25
C48	87-010-315-080		C-CAP,S 27P-50 CH
C50	87-012-140-080		CAP 470P
C51	87-010-994-080		C-CAP,S 680P-50 CH
C57	87-010-316-080		C-CAP,S 33P-50 CH
C58	87-010-316-080		C-CAP,S 33P-50 CH
C59	87-010-263-080		CAP, ELECT 100-10V
C60	87-010-196-080		CHIP CAPACITOR,0.1-25
C61	87-010-196-080		CHIP CAPACITOR,0.1-25
C62	87-010-370-080		CAP,E 330-6.3 SME
C65	87-010-404-080		CAP, ELECT 4.7-50V
C66	87-010-196-080		CHIP CAPACITOR,0.1-25
C67	87-010-263-080		CAP, ELECT 100-10V
C68	87-010-322-080		C-CAP,S 100P-50 CH
C75	87-010-197-080		CAP, CHIP 0.01 DM
C76	87-A10-102-080		CAP,E 1000-10 REA
C77	87-010-263-080		CAP, ELECT 100-10V
C78	87-010-197-080		CAP, CHIP 0.01 DM
C79	87-010-197-080		CAP, CHIP 0.01 DM<HE,K,EZ>
C80	87-010-112-080		CAP, ELECT 100-16V<HE,K,EZ>
C81	87-010-405-080		CAP, ELECT 10-50V
C82	87-010-405-080		CAP, ELECT 10-50V
C83	87-010-181-080		CAP,CHIP S 1800P
C84	87-010-181-080		CAP,CHIP S 1800P
C90	87-010-197-080		CAP, CHIP 0.01 DM
C91	87-010-404-080		CAP, ELECT 4.7-50V
C92	87-010-387-080		CAP,E 470-25 SME
C93	87-010-197-080		CAP, CHIP 0.01 DM
C94	87-010-197-080		CAP, CHIP 0.01 DM
C95	87-010-197-080		CAP, CHIP 0.01 DM
C96	87-010-221-080		CAP, ELECT 470-10V
C97	87-010-197-080		CAP, CHIP 0.01 DM
C98	87-012-154-080		C-CAP,S 150P-50 CH
C101	87-010-322-080		C-CAP,S 100P-50 CH
C102	87-010-322-080		C-CAP,S 100P-50 CH
C103	87-010-322-080		C-CAP,S 100P-50 CH
C104	87-010-322-080		C-CAP,S 100P-50 CH
C105	87-010-322-080		C-CAP,S 100P-50 CH
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C150	87-010-263-080		CAP, ELECT 100-10V
C151	87-010-197-080		CAP, CHIP 0.01 DM
D150	87-A40-123-010		LED,SLZ-8128A-01-B
FC1	88-CE3-606-010		FF-CABLE, 16P 1.0 230MM
FC2	88-909-321-110		FF-CABLE, 9P 32MM
FC3	88-906-251-110		FF-CABLE,6P 1.25
FC4	88-906-141-110		FF-CABLE,6P 1.25
FC5	88-905-301-110		FF-CABLE, 5P 300MM
L1	87-003-102-080		COIL, 10UH
X1	87-A70-046-080		VIB,XTAL 16.9344MHZ

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
PT-P C.B			
C103	87-010-928-090		CAP,E 4700-25 SMG
C109	87-010-260-080		CAP, ELECT 47-25V
C110	87-010-260-080		CAP, ELECT 47-25V
C111	87-010-247-080		CAP, ELECT 100-50V
C112	87-010-263-080		CAP, ELECT 100-10V
C122	87-010-260-080		CAP, ELECT 47-25V
C123	87-010-260-080		CAP, ELECT 47-25V
C167	87-010-196-080		CHIP CAPACITOR,0.1-25
C168	87-010-196-080		CHIP CAPACITOR,0.1-25
C169	87-010-196-080		CHIP CAPACITOR,0.1-25
C170	87-010-196-080		CHIP CAPACITOR,0.1-25
CNA103	88-CE3-644-010		CONN ASSY,5P 350MM PWR
⚠F101	87-026-681-080		PROTECTOR,5A 60V 491
⚠F102	87-026-681-080		PROTECTOR,5A 60V 491
⚠F103	87-026-681-080		PROTECTOR,5A 60V 491
⚠F104	87-026-681-080		PROTECTOR,5A 60V 491
PT-S C.B			
⚠	87-A90-505-080		FUSE CLAMP,TP00351-51
⚠	87-A60-317-010		TERMINAL, 1P MSC
⚠F107	87-035-452-010		FUSE,1A 250V T W/C
⚠PT101	88-CE3-618-010		PT,E<EZ>
⚠PT101	88-CE3-619-010		PT,H<HE,HR>
⚠PT101	88-CE3-620-010		PT,K<K>
⚠SW101	87-A90-234-010		SW,SL 1-2-2 SW2201<HE,HR>
DECK C.B			
PIN1	87-009-352-010		CONN,9P H WHT PH
SFR1	87-024-581-010		SFR,3.3K H KVSF637A
SOL1	82-ZM1-635-010		SOL ASSY,23
SW2	87-036-110-010		SW,MICRO SPPB62
SW3	87-036-110-010		SW,MICRO SPPB62
SW4	87-036-110-010		SW,MICRO SPPB62
SW5	87-036-110-010		SW,MICRO SPPB62
SW6	87-036-110-010		SW,MICRO SPPB62
RELAY C.B			
CNA301	88-CE3-603-010		CONN ASSY,7P RPH
DRIVE C.B			
CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO
CD MOTOR C.B			
CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

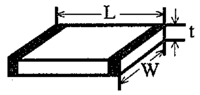
- コネクタについては、初回発注の扱いとはせず、受注後に業者へ発注し、供給致します。
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

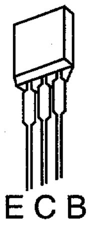
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



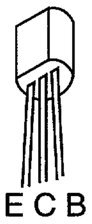
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード :A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

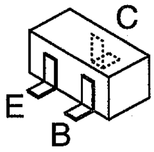
TRANSISTOR ILLUSTRATION



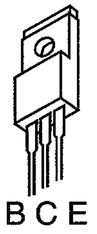
2SA933S
2SC5395



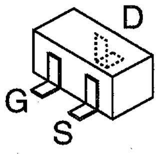
2SA952
2SC1815
2SD655
C2N5551
CSB1058
CSD655
CSD1489
KTA1266
KTC3198



2SA1235	DTC114TK
2SC2714	DTC144EK
2SC3052	KTA1298
CMBT5401	RT1N144C
CMBT5551	RT1P141C
DTA143EK	RT1P144C
DTA144TK	RT1P441C

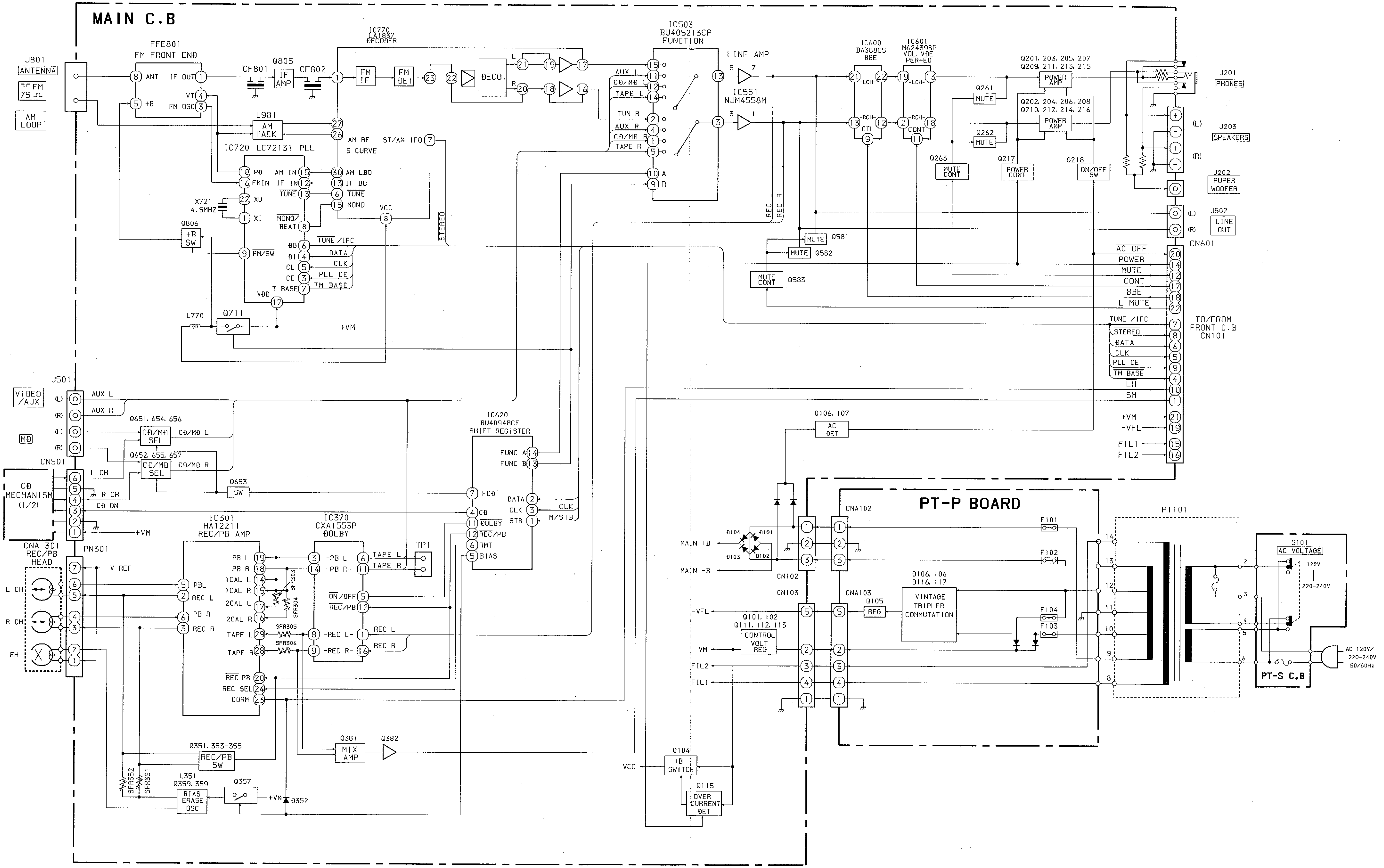


2SB1481
2SD2241

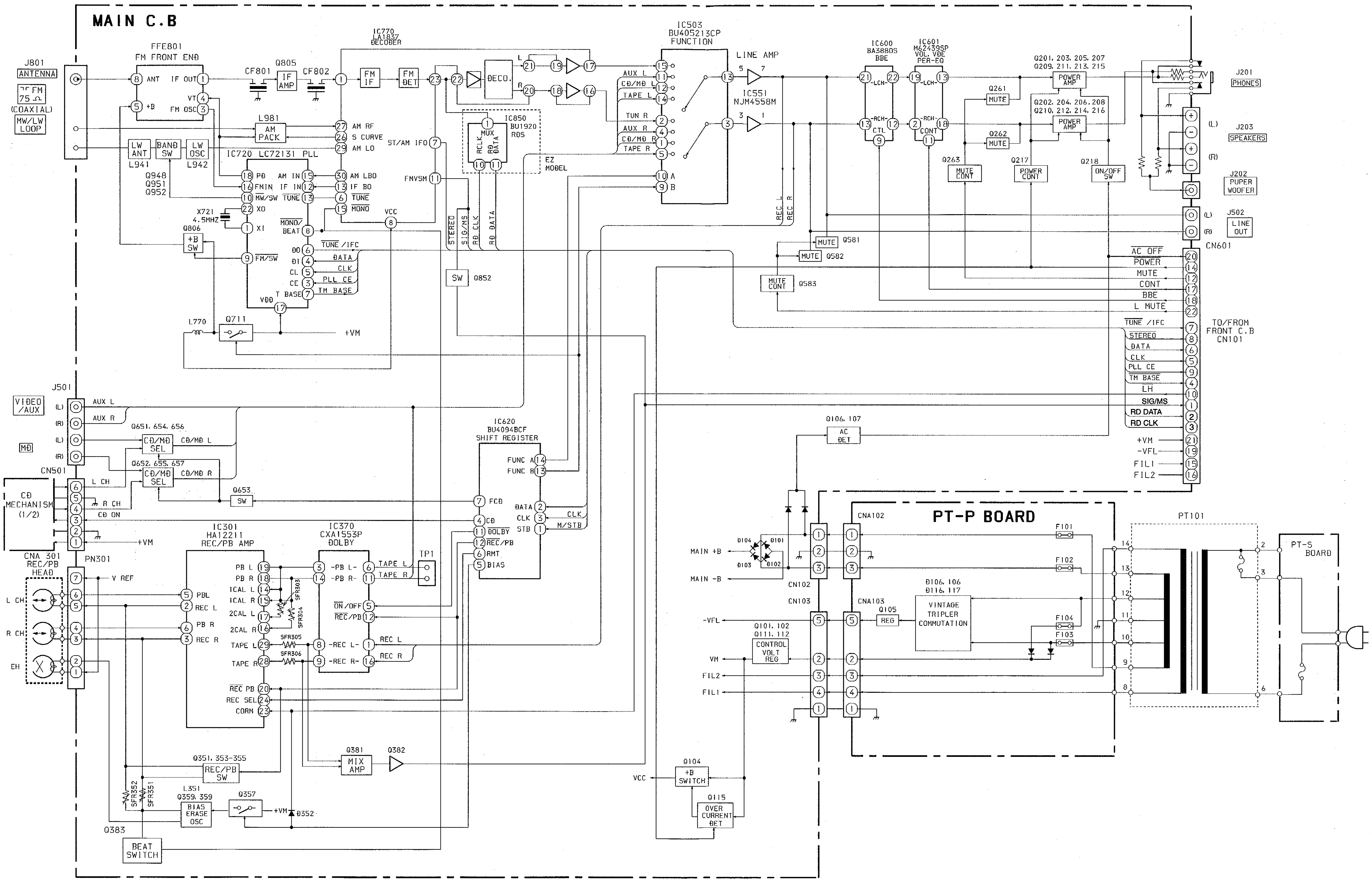


2SK2158

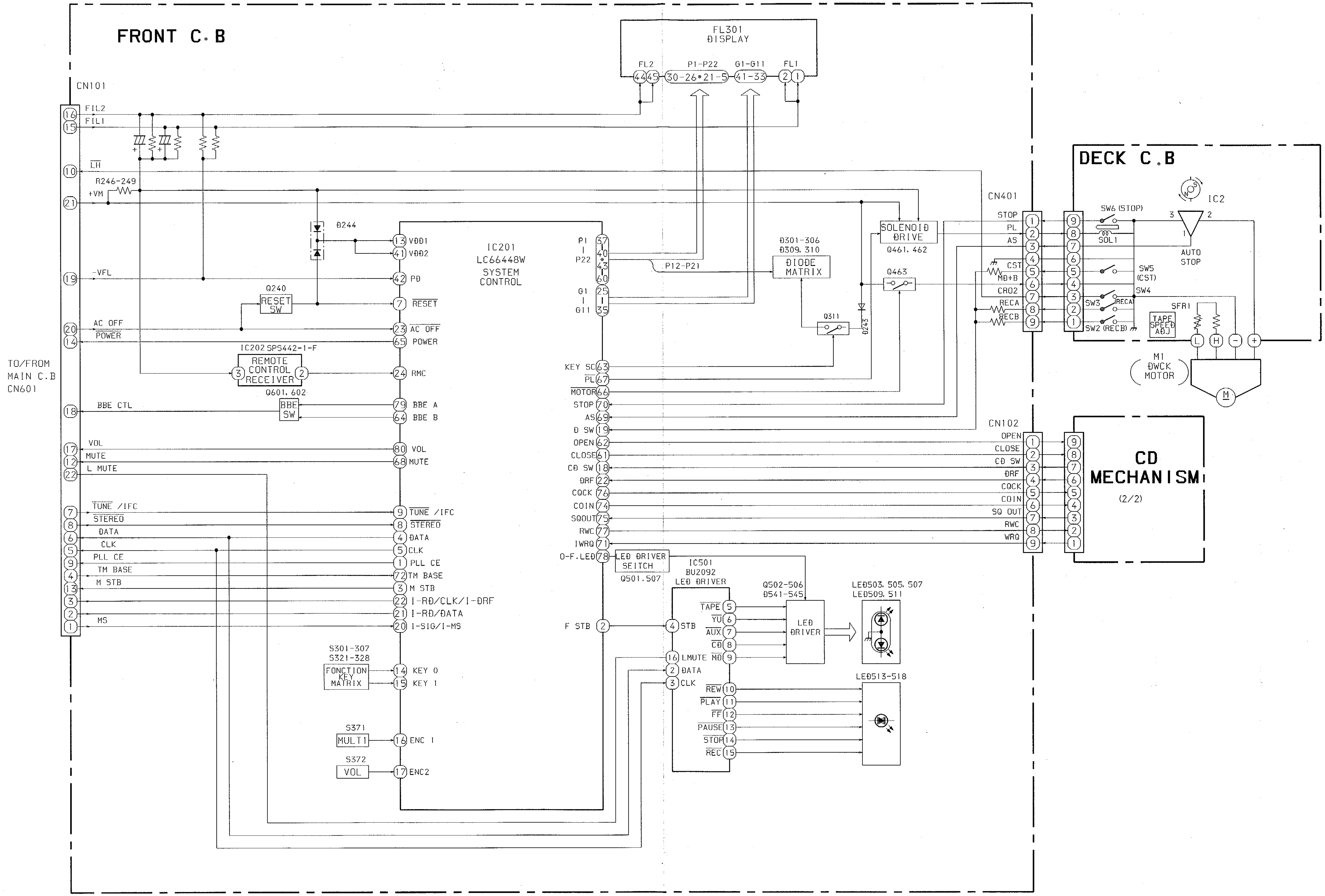
BLOCK DIAGRAM-1 (MAIN: HE, HR)


MAIN C.B
J801
ANTENNA
FM 75 Ω
AM LOOP
FFE801
FM FRONT END
ANT
IF OUT
+B
VT
FM OSC
CF801
Q805
IF AMP
CF802
IC770
LA1837
DECODER
FM IF
FM DET
DECO.
L981
AM PACK
IC720 LC72131 PLL
AM RF
S CURVE
ST/AM IFO
PD
FMIN
XO
XI
AM IN
IF IN
TUNE
AM LBO
IF BD
TUNE
MONO
MONO/BEAT
VCC
X721
4.5MHZ
Q806
+B SW
FM/SW
DO
DI
CL
CE
T BASE
VDD
TUNE/IFC
DATA
CLK
PLL CE
TM BASE
STEREO
L770
Q711
+VM
IC503
BU4052BCP
FUNCTION
AUX L
CD/MD L
TAPE L
TUN R
AUX R
CD/MD R
TAPE R
A
B
LINE AMP
IC551
NJM4558M
REC L
REC R
IC600
BA3880S
BBE
LCH
RCH
CTL
IC601
M62439SP
VOL. VDE
PER-EO
CONT
Q201, 203, 205, 207
Q209, 211, 213, 215
POWER AMP
Q202, 204, 206, 208
Q210, 212, 214, 216
POWER AMP
Q261
MUTE
Q262
MUTE
Q263
MUTE CONT
Q217
POWER CONT
Q218
ON/OFF SW
J201
PHONES
J203
SPEAKERS
(L)
(R)
J202
PUPER WOOFER
J502
LINE OUT
CN601
Q581
MUTE
Q582
MUTE
Q583
MUTE CONT
AC OFF
POWER
MUTE
CONT
BBE
L MUTE
TUNE/IFC
STEREO
DATA
CLK
PLL CE
TM BASE
LH
SM
TO/FROM FRONT C.B CN101
Q106, 107
AC DET
+VM
-VFL
FIL1
FIL2
J501
VIDEO/AUX
MD
AUX L
AUX R
Q651, 654, 656
CD/MD SEL
CD/MD L
Q652, 655, 657
CD/MD SEL
CD/MD R
CN501
CD MECHANISM (1/2)
L CH
R CH
CD ON
+VM
Q653
SW
IC620
BU4094BCF
SHIFT REGISTER
FUNC A
FUNC B
FCD
CD
DOLBY
REC/PB
RMT
BIAS
DATA
CLK
STB
M/STB
CNA 301
REC/PB HEAD
L CH
R CH
EH
PN301
V REF
IC301
HA12211
REC/PB AMP
PBL
REC L
PB R
REC R
PB L
PB R
1CAL L
1CAL R
2CAL L
2CAL R
TAPE L
TAPE R
REC PB
REC SEL
CORM
SFR303
SFR304
SFR305
SFR306
IC370
CXA1553P
DOLBY
-PB L-
-PB R-
ON/OFF
REC/PB
-REC L-
-REC R-
TAPE L
TAPE R
REC L
REC R
TP1
Q351, 353-355
REC/PB SW
SFR352
SFR351
L351
Q359, 359
BIAS ERASE OSC
Q357
+VM
D352
Q381
MIX AMP
Q382
VCC
Q104
+B SWITCH
Q115
OVER CURRENT DET
MAIN +B
MAIN -B
D104
D101
D103
D102
CN102
CN103
-VFL
Q101, 102
Q111, 112, 113
CONTROL VOLT REG
VM
FIL2
FIL1
PT-P BOARD
CNA102
CNA103
F101
F102
F103
F104
D106, 106
D116, 117
VINTAGE TRIPLER COMMUTATION
Q105
REG
PT101
S101
AC VOLTAGE
120V
220-240V
AC 120V/220-240V 50/60Hz
PT-S C.B

BLOCK DIAGRAM-2 (MAIN: K, EZ)

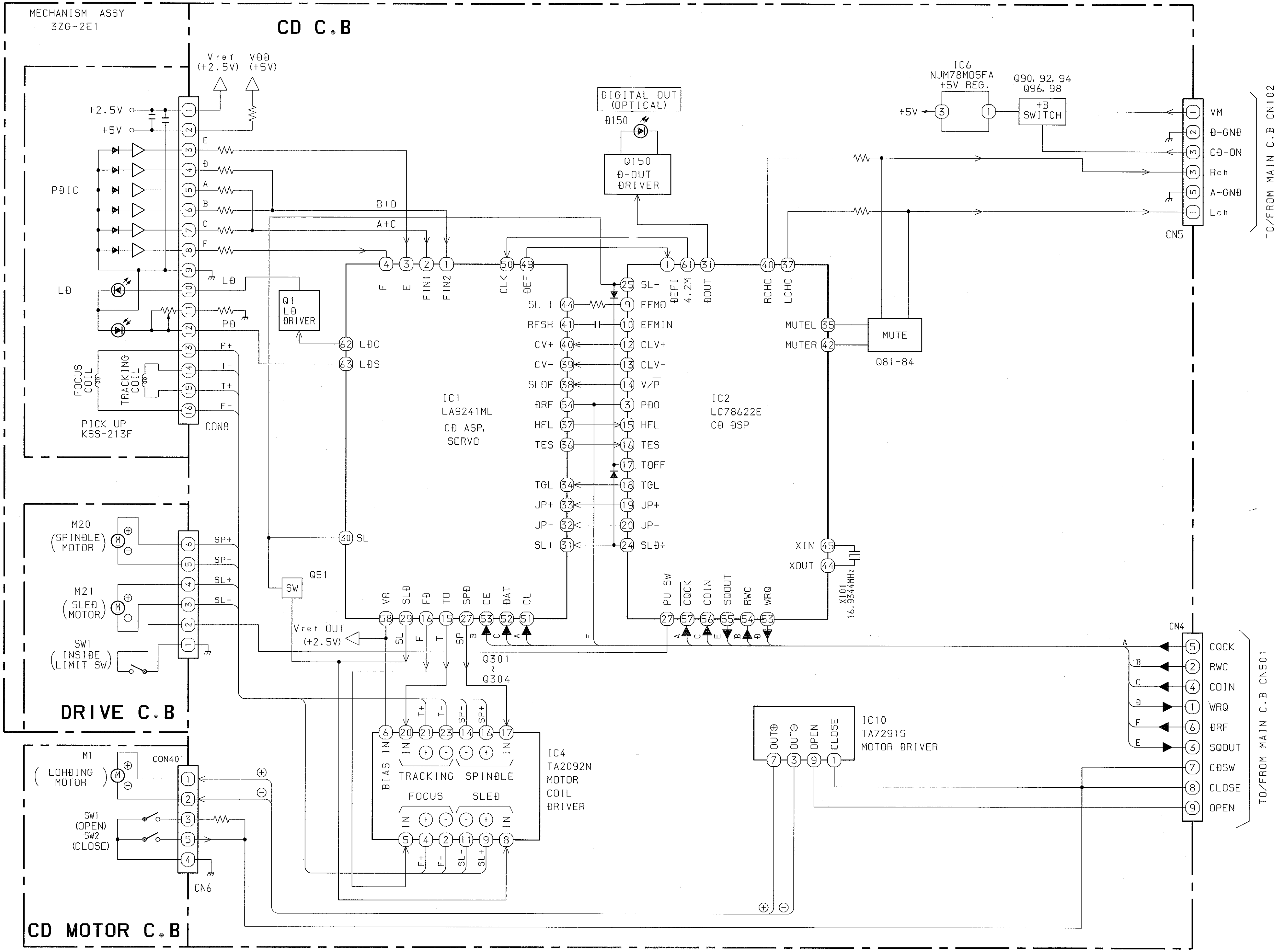

MAIN C.B
J801
ANTENNA
FM 75Ω
(COAXIAL)
MW/LW LOOP
FFE801
FM FRONT END
ANT
IF OUT
+B
VT
FM OSC
CF801
Q805
IF AMP
CF802
IC770
LA1837
DECODER
FM IF
FM DET
DECO.
L981
AM PACK
LW ANT
BAND SW
LW OSC
L941
L942
Q948
Q951
Q952
IC720 LC72131 PLL
AM RF
S CURVE
AM LO
ST/AM IFO
AM LBO
IF BO
TUNE
MONO
FMVSM
PD
AM IN
FMIN
IF IN
MW/SW
X721
4.5MHZ
XO
XI
MONO/BEAT
Q806
+B SW
FM/SW
DO
DI
CL
CE
T BASE
VDD
TUNE/IFC
DATA
CLK
PLL CE
TM BASE
VCC
L770
Q711
+VM
IC850
BU1920
RDS
MUX
RCLK
RD DATA
EZ MODEL
STEREO
SIO/MS
RD CLK
RD DATA
SW
Q852
IC503
BU405213CP
FUNCTION
AUX L
CD/MD L
TAPE L
TUN R
AUX R
CD/MD R
TAPE R
A
B
LINE AMP
IC551
NJM4558M
REC L
REC R
MUTE
Q581
MUTE
Q582
MUTE CONT
Q583
IC600
BA3880S
BBE
IC601
M62439SP
VOL VDE
PER-EQ
LCH
RCH
CTL
CONT
Q201, 203, 205, 207
Q209, 211, 213, 215
POWER AMP
Q261
MUTE
Q202, 204, 206, 208
Q210, 212, 214, 216
POWER AMP
Q262
MUTE
Q263
MUTE CONT
Q217
POWER CONT
Q218
ON/OFF SW
J201
PHONES
J203
SPEAKERS
(L)
(R)
J202
PUPER WOOFER
J502
LINE OUT
CN601
AC OFF
POWER
MUTE
CONT
BBE
L MUTE
TUNE/IFC
STEREO
DATA
CLK
PLL CE
TM BASE
LH
SIG/MS
RD DATA
RD CLK
+VM
-VFL
FIL1
FIL2
TO/FROM FRONT C.B CN101
J501
VIDEO/AUX
MD
AUX L
AUX R
Q651, 654, 656
CD/MD SEL
CD/MD L
Q652, 655, 657
CD/MD SEL
CD/MD R
Q653
SW
CN501
CD MECHANISM (1/2)
L CH
R CH
CD ON
+VM
CNA 301
REC/PB HEAD
PN301
V REF
L CH
R CH
EH
IC620
BU4094BCF
SHIFT REGISTER
FUNC A
FUNC B
FCD
CD
DOLBY
REC/PB
RMT
BIAS
DATA
CLK
STB
M/STB
IC301
HA12211
REC/PB AMP
PBL
REC L
PB R
REC R
PB L
PB R
1CAL L
1CAL R
2CAL L
2CAL R
TAPE L
TAPE R
REC PB
REC SEL
CORM
SFR303
SFR304
SFR305
SFR306
IC370
CXA1553P
DOLBY
-PB L-
-PB R-
ON/OFF
REC/PB
-REC L-
-REC R-
TAPE L
TAPE R
TP1
REC L
REC R
Q381
MIX AMP
Q382
Q351, 353-355
REC/PB SW
SFR352
SFR351
L351
Q359, 359
BIAS ERASE OSC
Q357
+VM
D352
Q383
BEAT SWITCH
Q106, 107
AC DET
MAIN +B
MAIN -B
D104
D101
D103
D102
CN102
CN103
-VFL
Q101, 102
Q111, 112
CONTROL VOLT REG
VM
FIL2
FIL1
VCC
Q104
+B SWITCH
Q115
OVER CURRENT DET
PT-P BOARD
CNA102
CNA103
Q105
REG
D106, 106
D116, 117
VINTAGE TRIPLER COMMUTATION
F101
F102
F104
F103
PT101
PT-S BOARD
AC 230V
50Hz

BLOCK DIAGRAM-3 (FRONT)



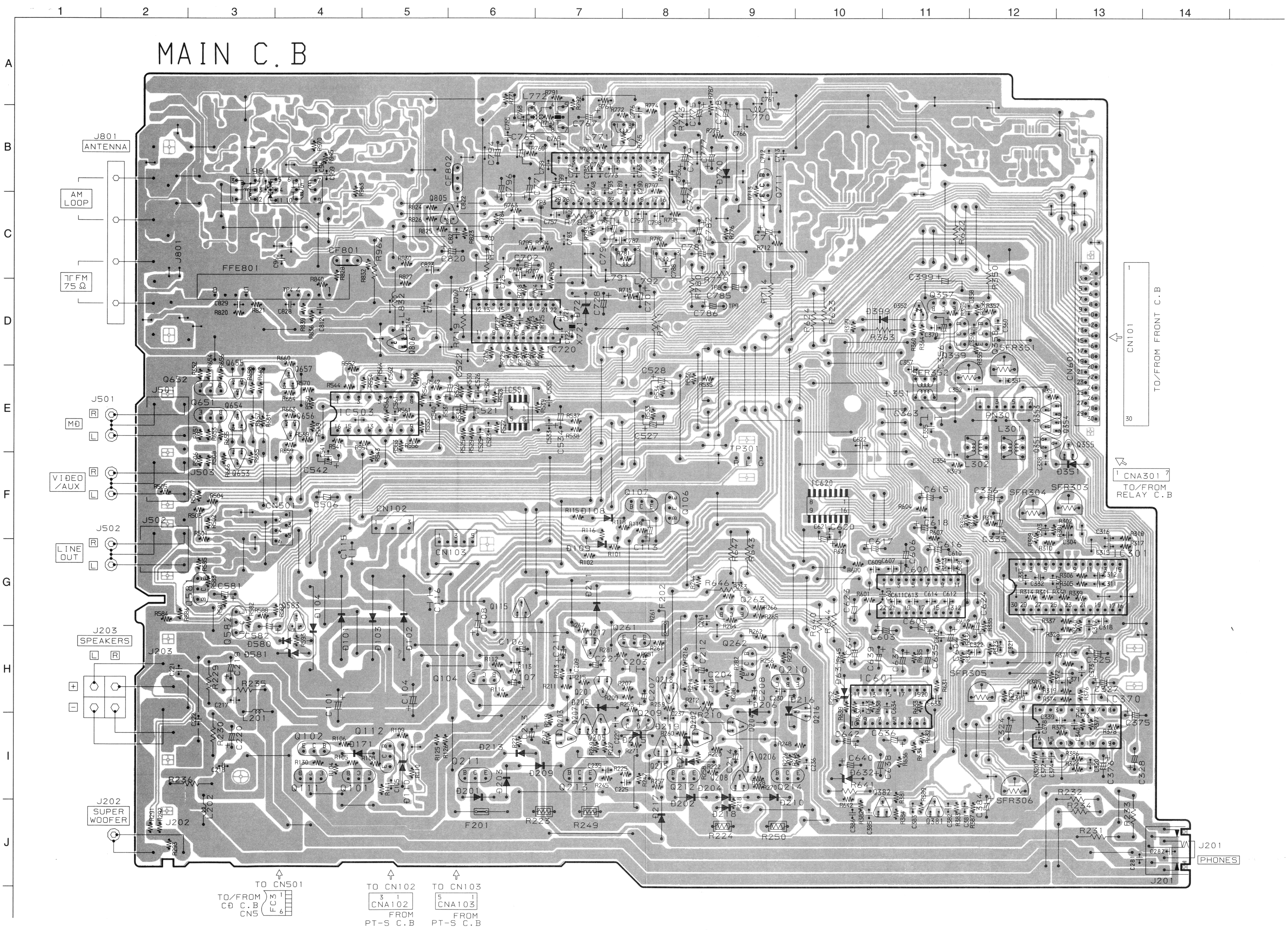
FRONT C.B
CN101
FIL2
FIL1
LH
R246-249
+VM
-VFL
AC OFF
POWER
BBE CTL
VOL
MUTE
L MUTE
TUNE /IFC
STEREO
DATA
CLK
PLL CE
TM BASE
M STB
MS
TO/FROM
MAIN C.B
CN601
D244
Q240
RESET SW
IC202 SPS442-1-F
REMOTE CONTROL RECEIVER
Q601, 602
BBE SW
S301-307
S321-328
FUNCTION KEY MATRIX
S371
MULTI
S372
VOL
IC201
LC66448W
SYSTEM CONTROL
VDD1
VDD2
PD
RESET
AC OFF
POWER
RMC
BBE A
BBE B
VOL
MUTE
TUNE /IFC
STEREO
DATA
CLK
PLL CE
TM BASE
M STB
I-RD/CLK/I-DRF
I-RD/DATA
I-SIG/I-MS
KEY 0
KEY 1
ENC 1
ENC2
P1
I
P22
G1
I
G11
KEY SC
PL
MOTOR
STOP
AS
D SW
OPEN
CLOSE
CD SW
DRF
CQCK
COIN
SQOUT
RWC
IWRQ
O-F.LED
F STB
P12-P21
FL301
DISPLAY
FL2
P1-P22
G1-G11
FL1
30-26•21-5
41-33
D301-306
D309, 310
DIODE MATRIX
SOLENOID DRIVE
Q461, 462
Q463
Q311
D243
LED DRIVER SEITCH
Q501, 507
IC501
BU2092
LED DRIVER
STB
LMUTE
DATA
CLK
TAPE
YU
AUX
CD
MD
REW
PLAY
FF
PAUSE
STOP
REC
Q502-506
D541-545
LED DRIVER
LED503, 505, 507
LED509, 511
LED513-518
CN401
STOP
PL
AS
CST
MD+B
CRO2
RECA
RECB
DECK C.B
SW6 (STOP)
SOL1
IC2
3
2
1
AUTO STOP
SW5
(CST)
SW4
SW3
RECA
SW2 (RECB)
SFR1
TAPE SPEED ADJ
L
H
-
+
M1
DWCK MOTOR
M
CN102
OPEN
CLOSE
CD SW
DRF
CQCK
COIN
SQ OUT
RWC
WRQ
CD MECHANISM
(2/2)

BLOCK DIAGRAM-4 (CD)

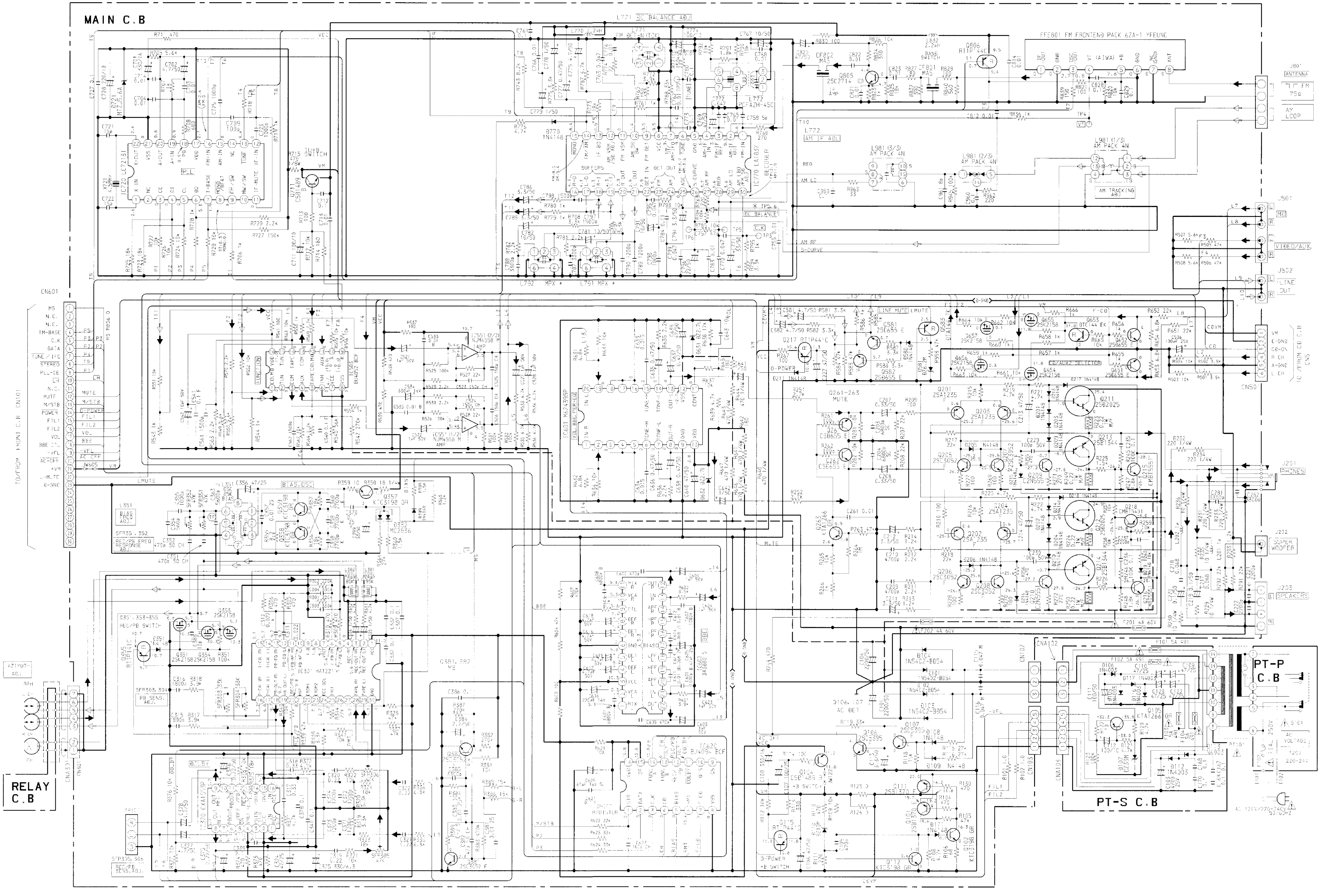


MECHANISM ASSY
3ZG-2E1
CD C.B
Vref (+2.5V)
VDD (+5V)
+2.5V
+5V
PDIC
LD
PD
PICK UP
KSS-213F
FOCUS COIL
TRACKING COIL
CON8
E
D
A
B
C
F
B+D
A+C
F+
T-
T+
F-
Q1
LD DRIVER
LDO
LDS
IC1
LA9241ML
CD ASP, SERVO
FIN1
FIN2
CLK
DEF
SL I
RFSH
CV+
CV-
SLOF
DRF
HFL
TES
TGL
JP+
JP-
SL+
SL-
VR
SLD
FD
TD
SPD
CE
DAT
CL
DIGITAL OUT (OPTICAL)
D150
Q150
D-OUT DRIVER
IC2
LC78622E
CD DSP
SL-
EFMO
EFMIN
CLV+
CLV-
V/P
PDO
HFL
TES
TOFF
TGL
JP+
JP-
SLD+
DEFI 4.2M
DOUT
RCHO
LCHO
MUTEL
MUTER
MUTE
Q81-84
XIN
XOUT
X101
16.9344MHz
PU SW
CQCK
COIN
SQOUT
RWC
WRQ
IC6
NJM78M05FA
+5V REG.
+5V
Q90, 92, 94
Q96, 98
+B SWITCH
VM
D-GND
CD-ON
Rch
A-GND
Lch
CN5
TO/FROM MAIN C.B CN102
M20
SPINDLE MOTOR
SP+
SP-
M21
SLED MOTOR
SL+
SL-
SW1
INSIDE LIMIT SW
DRIVE C.B
Q51
SW
Vref OUT (+2.5V)
SL
F
T
SP
Q301 ~ Q304
IC4
TA2092N
MOTOR COIL DRIVER
BIAS IN
IN
T+
T-
SP-
SP+
TRACKING
SPINDLE
FOCUS
SLED
F+
F-
SL-
SL+
M1
LOADING MOTOR
CON401
SW1 (OPEN)
SW2 (CLOSE)
CN6
CD MOTOR C.B
IC10
TA7291S
MOTOR DRIVER
OUT⊕
OUT⊖
OPEN
CLOSE
CN4
CQCK
RWC
COIN
WRQ
DRF
SQOUT
CDSW
CLOSE
OPEN
TO/FROM MAIN C.B CN501

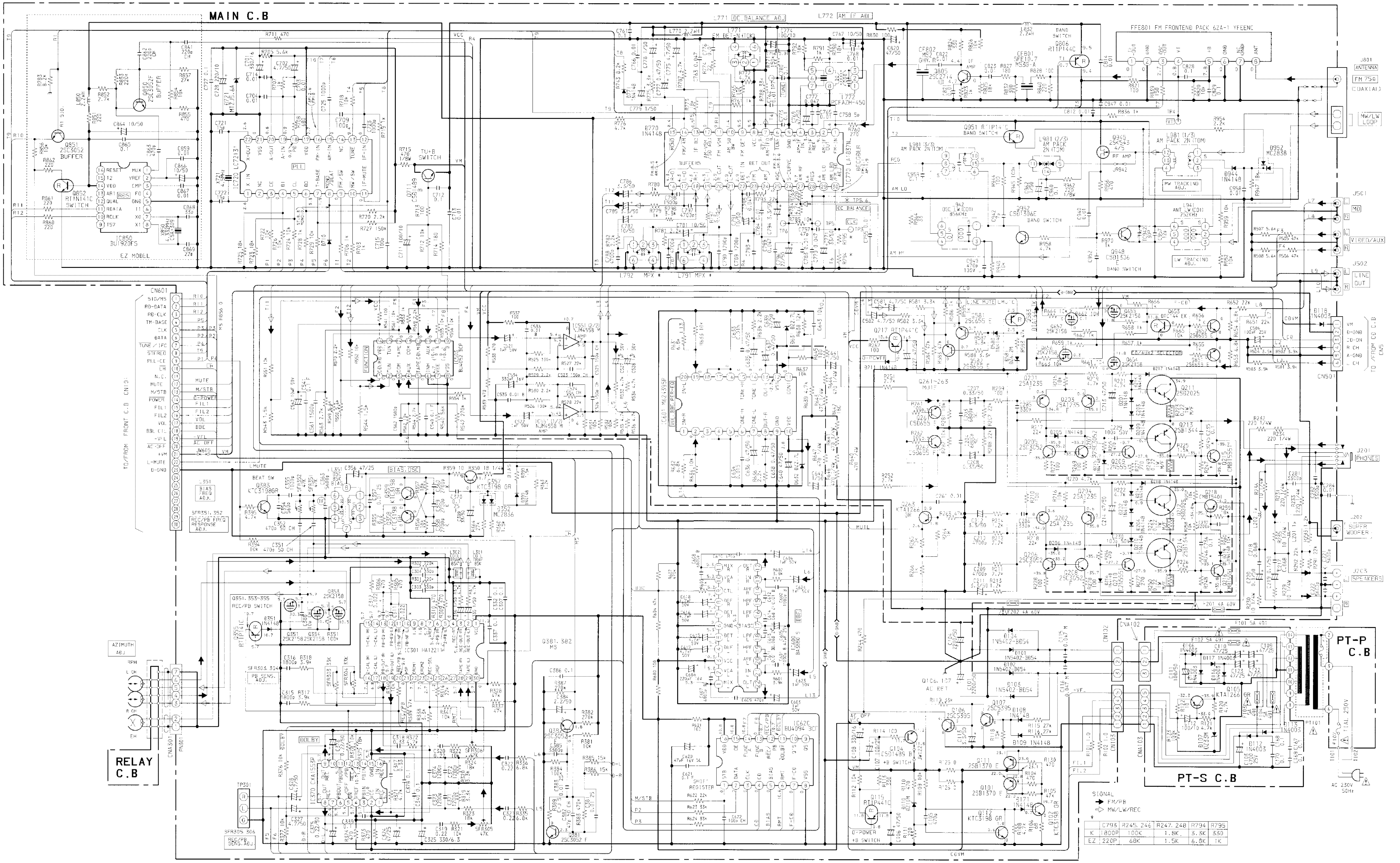
WIRING-1 (MAIN: HE, HR)


MAIN C.B
1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
J801
ANTENNA
AM LOOP
FM 75Ω
FFE801
J501
MD
R
L
VIDEO /AUX
R
L
J503
J502
LINE OUT
R
L
J203
SPEAKERS
L R
+
−
J202
SUPER WOOFER
J201
PHONES
CN501
CN102
CN103
CN601
CN101
TO/FROM FRONT C.B
CNA301
TO/FROM RELAY C.B
IC503
IC551
IC720
IC620
IC600
IC601
IC301
IC370
TO CN501
TO/FROM CD C.B CN5
FC3
TO CN102
CNA102
FROM PT-S C.B
TO CN103
CNA103
FROM PT-S C.B

SCHEMATIC DIAGRAM-1 (MAIN: HE, HR)


MAIN C.B
RELAY C.B
PT-P C.B
PT-S C.B
IC720 LC72131
PLL
IC770 LA1837
DECODER
FE801 FM FRONTEND PACK 6ZA-1 YFEUNC
J801 ANTENNA
FM 75Ω
AM LOOP
L771 DC BALANCE ADJ
L772 AM IF ADJ
L981 AM PACK 4N
AM TRACKING ADJ
J501 VIDEO/AUX
J502 LINE OUT
CN601
TO/FROM FRONT C.B CN101
CN501
TO/FROM CD C.B CN5
IC501 BU4052 BCP
IC551 NJM4558 M
IC601 M62439SP
IC301 HA12217
IC401 BA3880 S
IC620 BU4094 BCF
DOLBY
BIAS OSC
L351 BIAS FREQ ADJ
REC/PB SWITCH
PB SENS. ADJ
REC/PB SENS. ADJ
CD/AUX2 SELECTOR
LINE MUTE
J201 PHONES
J202 SUPER WOOFER
J203 SPEAKERS
F201 4A 60V
F101 5A 49I

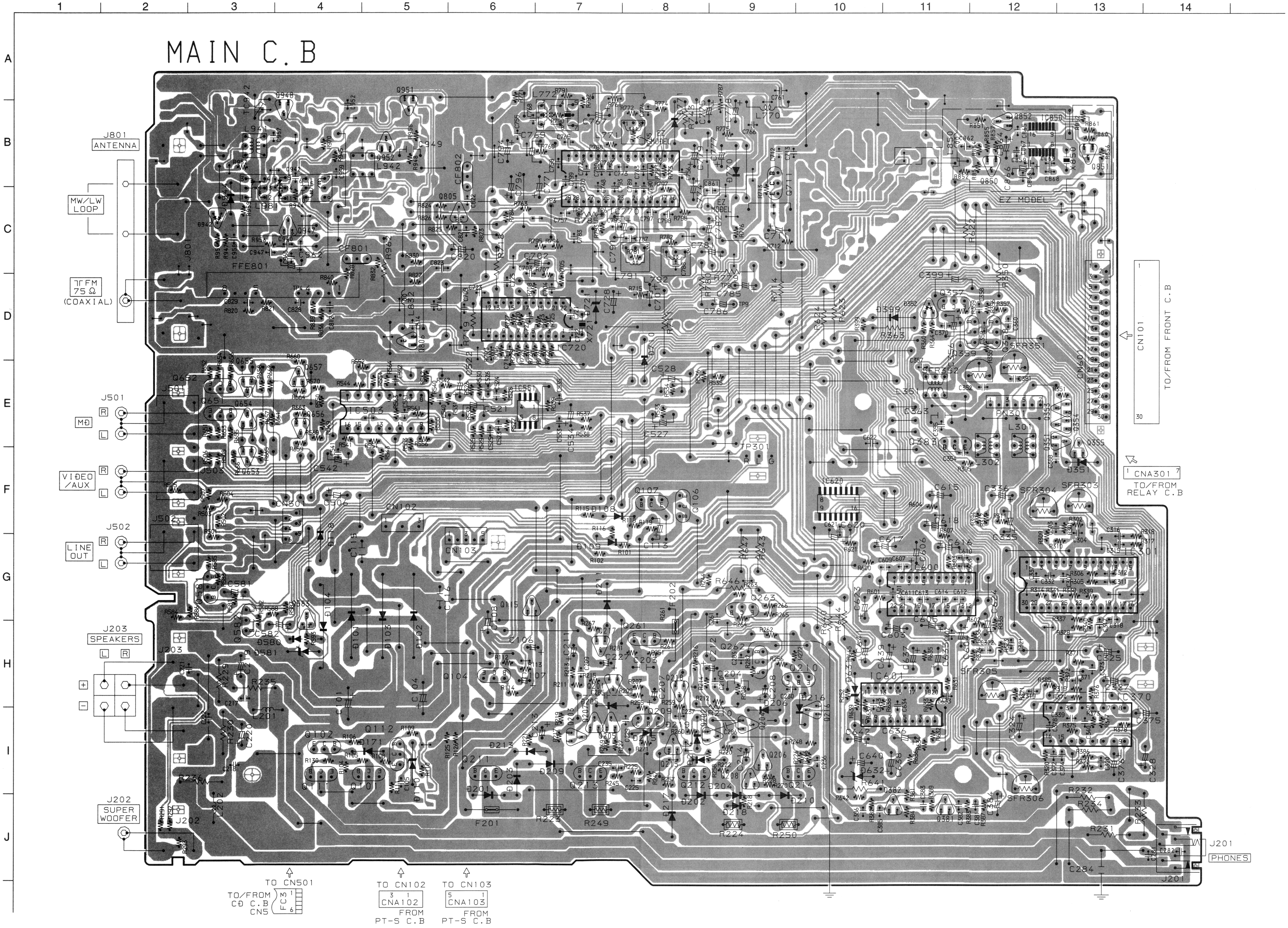
SCHEMATIC DIAGRAM-2 (MAIN: K, EZ)


MAIN C.B
L771 DC BALANCE ADJ.
L772 AM IF ADJ.
FFE801 FM FRONTEND PACK 6ZA-1 YFEENC
J801 ANTENNA
FM 75Ω COAXIAL
MW/LW LOOP
IC850 BU1920FS
EZ MODEL
Q851 2SC3052 BUFFER
Q852 RT1N141C SWITCH
Q850 2SC3052F BUFFER
IC720 LC72131
PLL
Q711 2SB1469
TU+B SWITCH
IC770 LA1837NL
DECODER
BUFFERS
DC BALANCE
L792 MPX
L791 MPX
Q806 RT1P144C BAND SWITCH
CF802
Q805 2SC2714 IF AMP
CF801 SFE10.7 MS3A
Q851 RT1P144C BAND SWITCH
Q945 2SK543 RF AMP
L981 (2/3) AM PACK 2N(TOM)
L981 (3/3) AM PACK 2N(TOM)
L981 (1/3) AM PACK 2N(TOM)
Q952 MC2838
MW TRACKING ADJ.
L942 OSC LW COIL 856kHz
L941 ANT LW COIL 252kHz
Q952 CSD1306E BAND SWITCH
Q948 CSD1336 BAND SWITCH
LW TRACKING ADJ.
J501
MD
VIDEO/AUX
J502 LINE OUT
CN601
TO/FROM FRONT C.B CN101
IC502 BU4066BCF
FUNCTION
IC551 (2/2) NJM4558 AMP
IC551 (1/2) NJM4558 M AMP
IC601 M62435BF
VOL/BBE/FIL2/L
LINE MUTE
Q217 RT1P141C
Q561 2SC2655 E
Q562 2SK2158
Q657 2SK2158
Q652 2SK2158
CD/AUX/MD SELECTOR
Q653 2SK2158
Q654 2SK2158
Q655 2SC2655 E
D118 1N4003
CN501 TO/FROM CD C.B CN5
Q261~263 MUTE
Q201 2SA1235
Q203 2SA1235
Q211 2SD2025
Q213 2SB1344
Q205 2SC5252
Q207 2SC3052
Q204 2SA1235
Q202 2SA1235
Q212 2SD2025
Q214 2SB1344
Q218 CMBT5401
J201 PHONES
J202 SUPER WOOFER
J203 SPEAKERS
F201 4A 60V
F202 4A 60V
L351 BIAS FREQ ADJ.
Q353 KTC3198GR BEAT SW
BIAS OSC
SFR351, 352 REC/PB F/F,Q RESPONSE ADJ.
Q352 MC2836
Q351, 353~355 REC/PB SWITCH
Q355 RT1P141C
Q353 2SK2158
Q354 2SK2158
Q356 2SK2158
IC301 HA12211
SFR304, 306 PB SENS ADJ.
Q381, 382 MS
Q382 2SC3052F
Q381 2SC3052 F
AZIMUTH ADJ.
RELAY C.B
CNA301
CN301
IC370 CXA1552P
DOLBY
TP301
SFR305, 306 REC/PB SENS. ADJ.
IC600 BU4066
BBE
IC620 BU4094 BCF
SHIFT REGISTER
Q106, 107 AC DET
D104 1N5402-B654
D101 1N5402-B654
D102 1N5402-B654
D103 1N5402-B654
Q106 2SC5395
Q107 2SC5395
Q104 CSD1495 B
D108 1N4148
D109 1N4148
Q111 2SB1370 F
Q101 2SB1370 E
Q115 RT1P441C
D-POWER +B SWITCH
Q112 KTC3198 GR
Q102 KTC3198 GR
CN102
CNA102
CN103
CNA103
F101 5A 491
F102 5A 491
D117 1N4003
Q105 KTA1266 GR
D107 6233M
D112 1N4003
D113 1N4003
PT101
PT-P C.B
PT-S C.B
AC 230V 50Hz
SIGNAL
FM/PB
MW/LW/REC

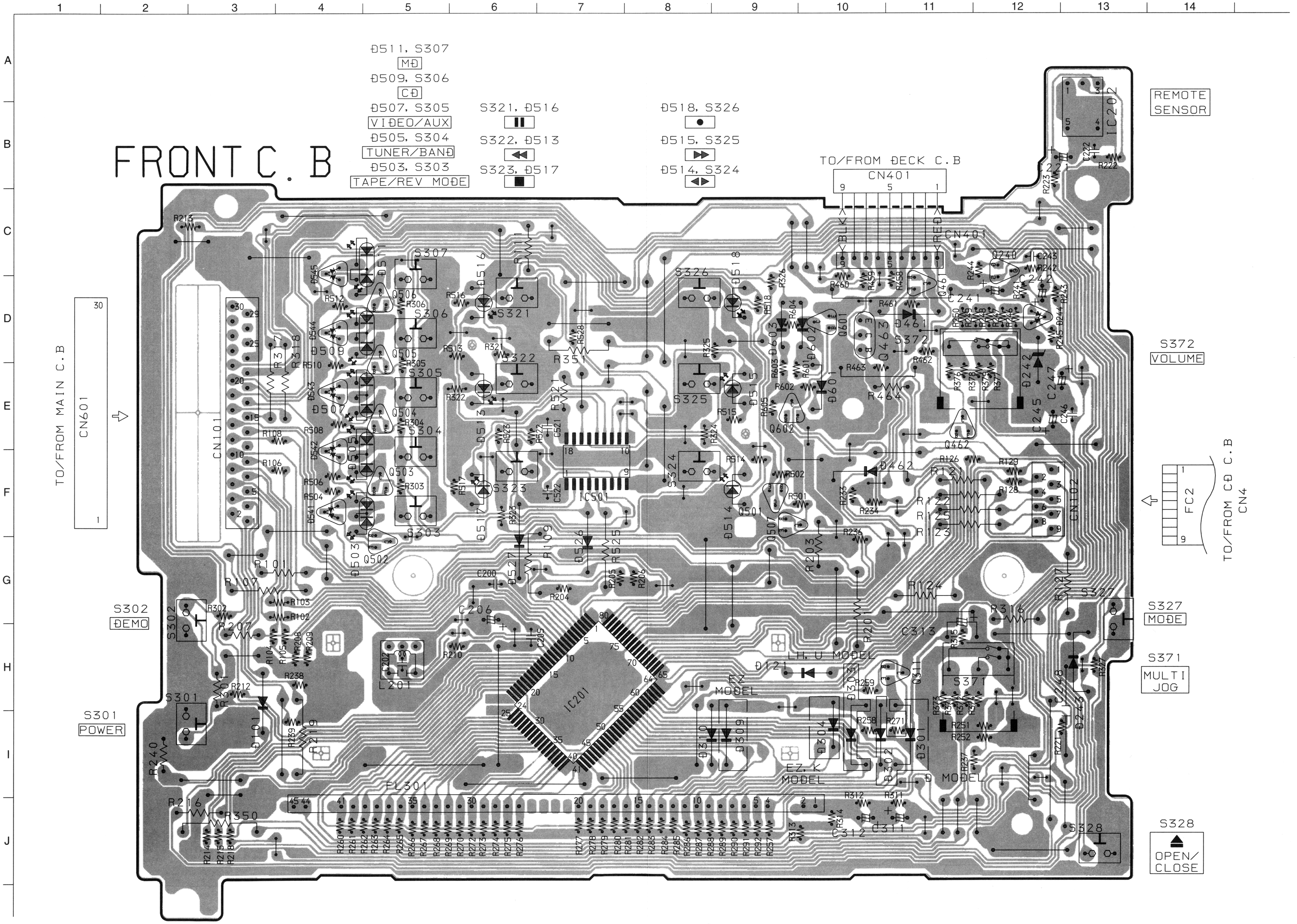
*

	C793	R245, 246	R247, 248	R794	R795
K	1800P	100K	1.8K	3.3K	330
EZ	220P	68K	1.5K	6.8K	1K

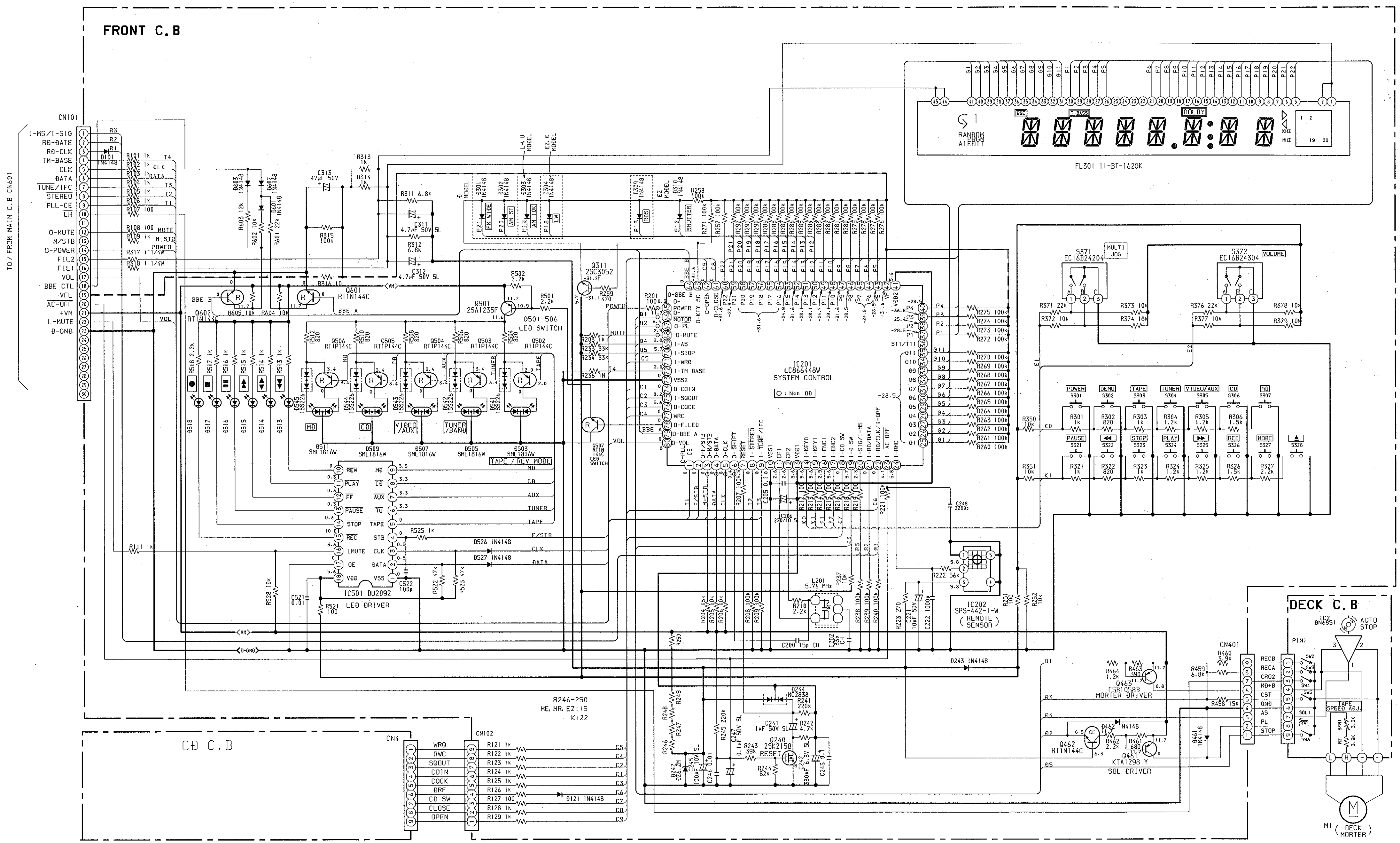
WIRING-2 (MAIN: K, EZ)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
MAIN C.B
J801
ANTENNA
MW/LW
LOOP
FM
75 Ω
(COAXIAL)
J501
MD
R
L
VIDEO
/AUX
R
L
J502
LINE
OUT
R
L
J203
SPEAKERS
L
R
+
−
J202
SUPER
WOOFER
CN101
TO/FROM FRONT C.B
1
30
CNA301
TO/FROM
RELAY C.B
J201
PHONES
EZ MODEL
IC503
IC601
IC620
IC301
CN501
CN102
CN103
F201
TO CN501
TO/FROM
CD C.B
CN5
FC3
TO CN102
CNA102
FROM
PT-S C.B
TO CN103
CNA103
FROM
PT-S C.B

WIRING-3 (FRONT)

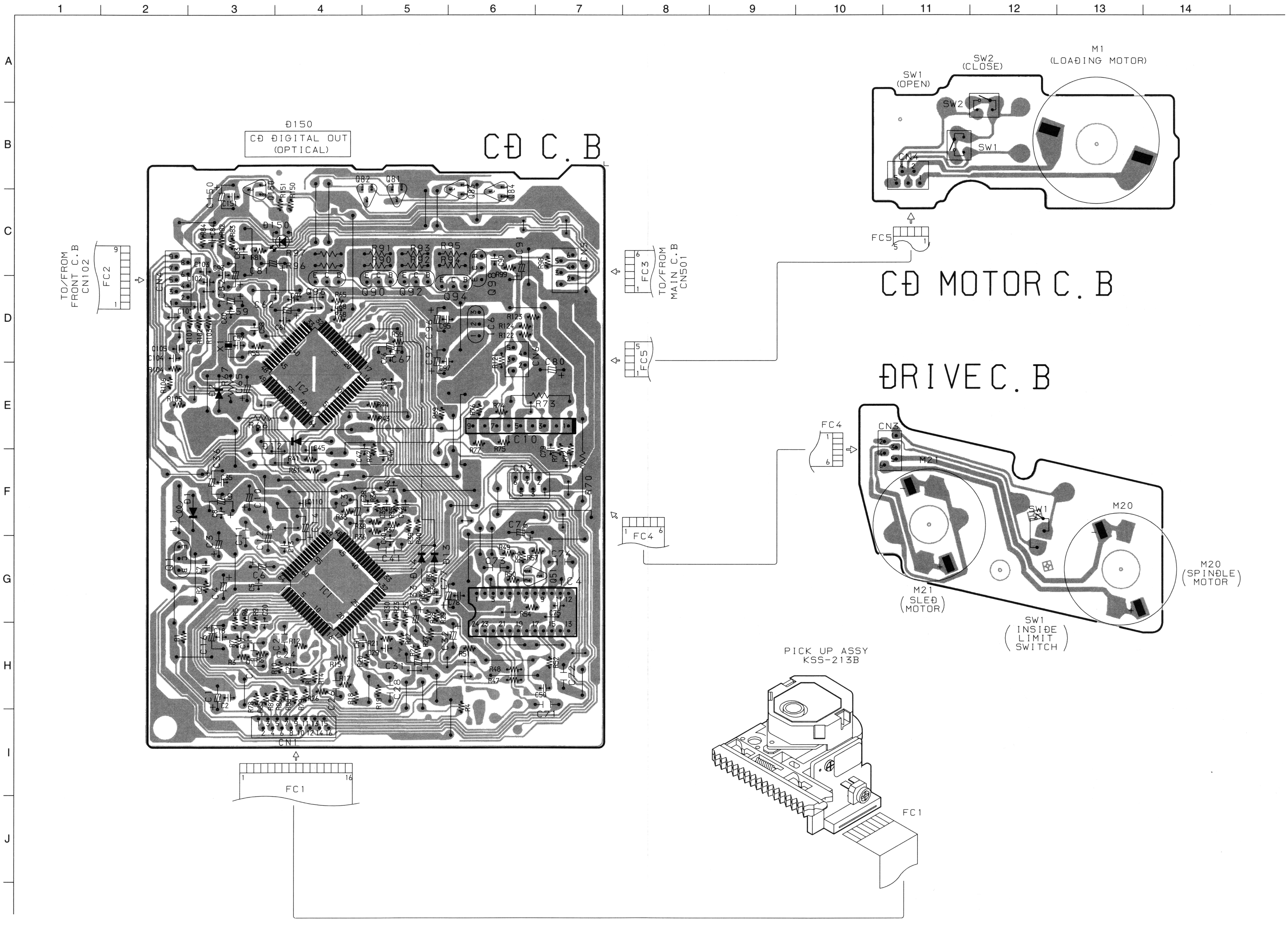

FRONT C.B
D511, S307
MD
D509, S306
CD
D507, S305
VIDEO/AUX
D505, S304
TUNER/BAND
D503, S303
TAPE/REV MODE
S321, D516
S322, D513
S323, D517
D518, S326
D515, S325
D514, S324
TO/FROM DECK C.B
CN401
REMOTE SENSOR
IC202
S372
VOLUME
TO/FROM MAIN C.B
CN601
CN101
IC501
TO/FROM CD C.B
CN4
FC2
CN102
S327
MODE
S371
MULTI JOG
S302
DEMO
S301
POWER
IC201
FL301
LH, U MODEL
EZ MODEL
EZ, K MODEL
D MODEL
S328
OPEN/CLOSE

SCHEMATIC DIAGRAM-3 (FRONT)

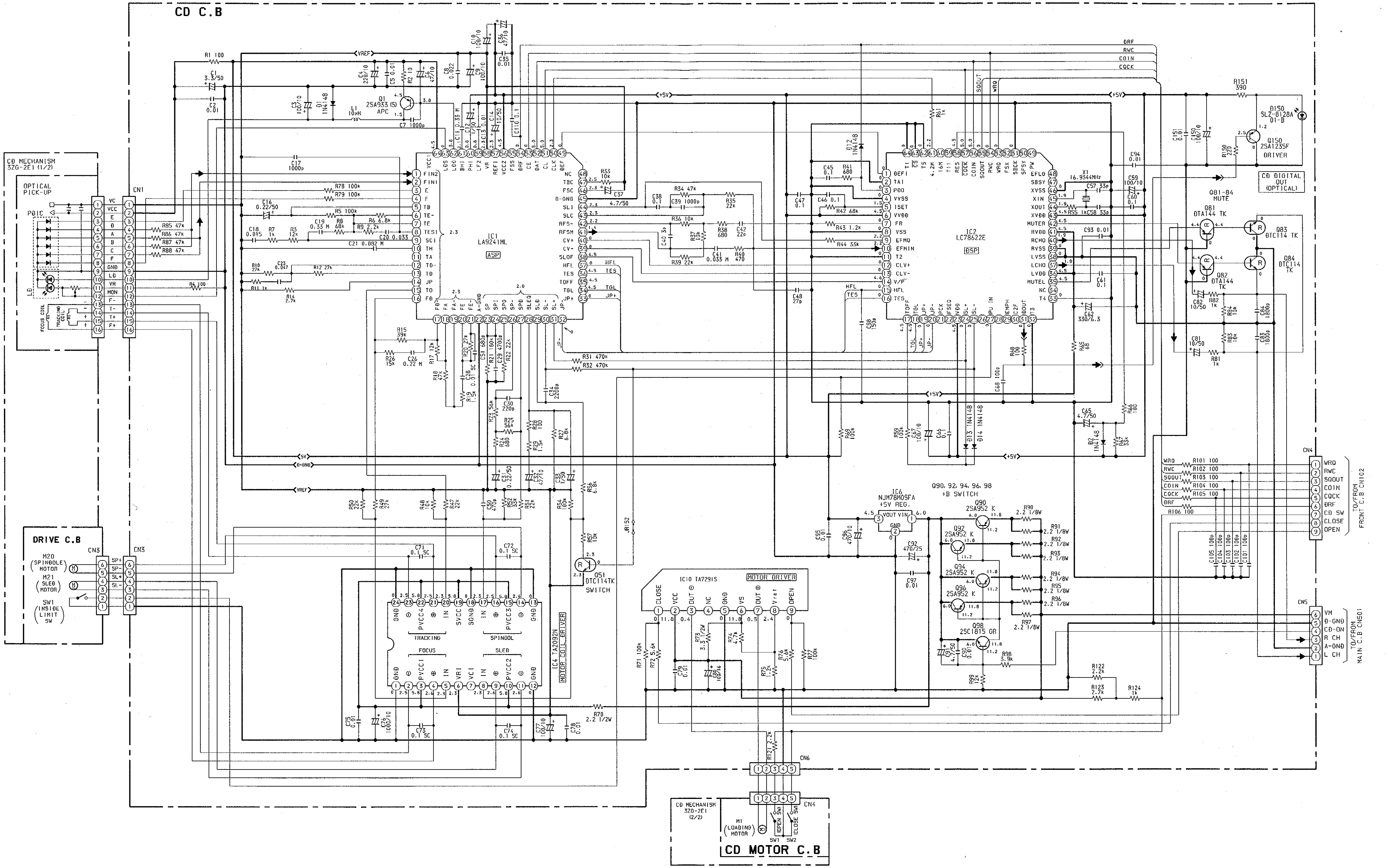


FRONT C.B
CN101
TO / FROM MAIN C.B CN601
I-MS/I-SIG
RD-DATE
RD-CLK
TM-BASE
CLK
DATA
TUNE/IFC
STEREO
PLL-CE
LM
O-MUTE
M/STB
O-POWER
FIL2
FIL1
VOL
BBE CTL
-VFL
AC-OFF
+VM
L-MUTE
D-GND
FL301 11-BT-162GK
RANDOM
A1EDIT
BBE
T-BASS
DOLBY
KHZ
MHZ
IC201
LC866448W
SYSTEM CONTROL
O : Non OO
Q311 2SC5052
Q501 2SA1235F
Q501-506 LED SWITCH
Q601 RT1N144C
Q602 RT1N144C
Q506 RT1P144C
Q505 RT1P144C
Q504 RT1P144C
Q503 RT1P144C
Q502 RT1P144C
D511 SML1816W
D509 SML1816W
D507 SML1816W
D505 SML1816W
D503 SML1816W
MD
CD
VIDEO /AUX
TUNER /BAND
TAPE / REV MODE
REW
PLAY
FF
PAUSE
STOP
REC
LMUTE
CE
VDD
TU
TAPE
STB
CLK
DATA
VSS
IC501 BU2092
LED DRIVER
Q507 RT1N144C LED SWITCH
L201 5.76 MHz
IC202 SPS-442-1-W
(REMOTE SENSOR)
D243 1N4148
D244 MC2838
Q240 2SK2158 RESET
S371 EC16B24204
MULTI JOG
S372 EC16B24304
VOLUME
POWER
DEMO
TAPE
TUNER
VIDEO/AUX
CD
MD
PAUSE
STOP
PLAY
REC
MODE
S301
S302
S303
S304
S305
S306
S307
S321
S322
S323
S324
S325
S326
S327
S328
R246-250
HE, HR, EZ:15
K:22
CD C.B
CN4
CN102
WRQ
RWC
SQOUT
COIN
CQCK
DRF
CD SW
CLOSE
OPEN
D121 1N4148
DECK C.B
CN401
RECB
RECA
CRO2
MD+B
CST
GND
AS
PL
STOP
Q463 CSR1058B
MORTER DRIVER
Q462 RT1N144C
Q461 KTA1298 Y
SOL DRIVER
IC2 DN6851
AUTO STOP
TAPE SPEED ADJ.
M1 (DECK MORTER)

WIRING-4 (CD)

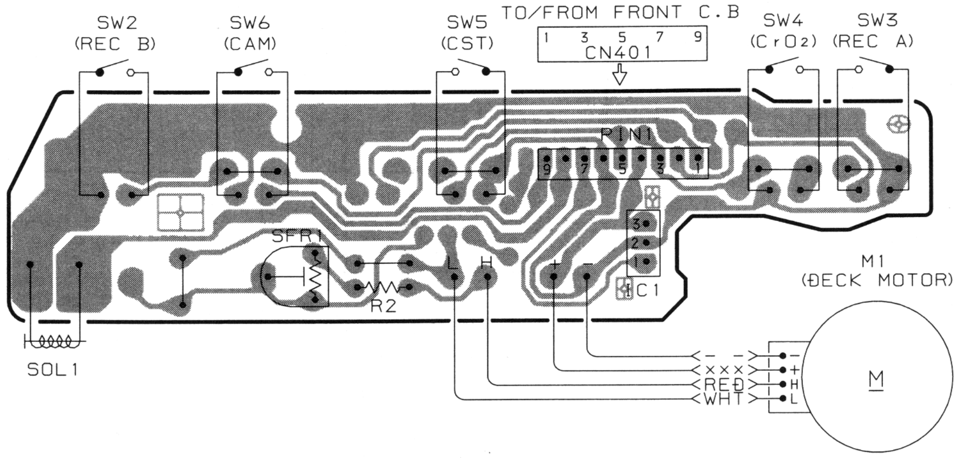

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
D150
CD DIGITAL OUT (OPTICAL)
CD C.B
TO/FROM FRONT C.B CN102
FC2
TO/FROM MAIN C.B CN501
FC3
FC5
FC4
FC1
CN1
CN2
CN5
CN6
CN3
IC1
IC2
IC10
SW1 (OPEN)
SW2 (CLOSE)
M1 (LOADING MOTOR)
CN4
CD MOTOR C.B
DRIVE C.B
CN3
M21
M20
M21 (SLED MOTOR)
M20 (SPINDLE MOTOR)
SW1 (INSIDE LIMIT SWITCH)
PICK UP ASSY KSS-213B
FC1

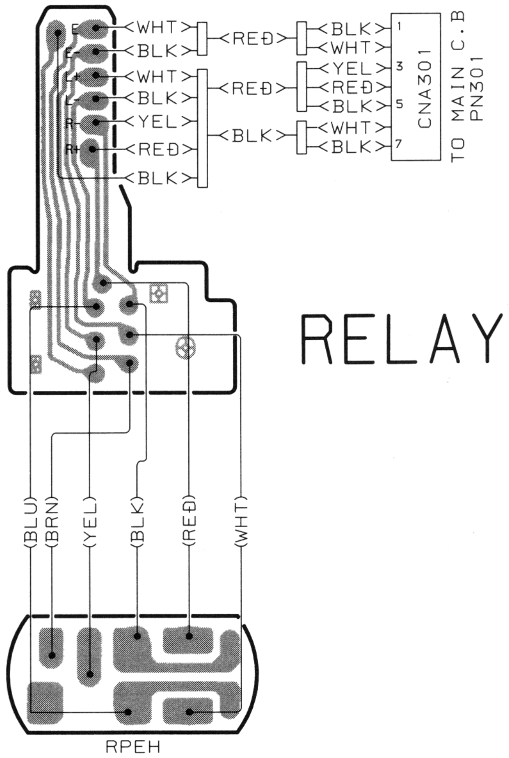
SCHEMATIC DIAGRAM-4 (CD)


CD C.B
CD MECHANISM 3ZG-2E1 (1/2)
OPTICAL PICK-UP
PDIC
LD
FOCUS COIL
TRACKING COIL
CN1
IC1 LA9241ML ASP
IC2 LC78622E DSP
X1 16.9344MHz
Q1 2SA933 (S) APC
D150 SLZ-8128A 01-B
Q150 2SA1235F DRIVER
CD DIGITAL OUT (OPTICAL)
Q81~84 MUTE
Q81 DTA144 TK
Q82 DTA144 TK
Q83 DTC114 TK
Q84 DTC114 TK
DRIVE C.B
M20 SPINDOLE MOTOR
M21 SLED MOTOR
SW1 INSIDE LIMIT SW
CN3
IC4 TA2092N MOTOR COIL DRIVER
TRACKING
SPINDOL
FOCUS
SLED
Q51 DTC114TK SWITCH
IC10 TA7291S MOTOR DRIVER
IC6 NJM78M05FA +5V REG.
Q90, 92, 94, 96, 98 +B SWITCH
Q90 2SA952 K
Q92 2SA952 K
Q94 2SA952 K
Q96 2SA952 K
Q98 2SC1815 GR
CN4
WRQ
RWC
SQOUT
COIN
CQCK
DRF
CD SW
CLOSE
OPEN
TO/FROM FRONT C.B CN102
CN5
VM
D-GND
CD-ON
R CH
A-GND
L CH
TO/FROM MAIN C.B CN601
CN6
CD MECHANISM 3ZG-2E1 (2/2)
M1 LOADING MOTOR
SW1
SW2
CD MOTOR C.B

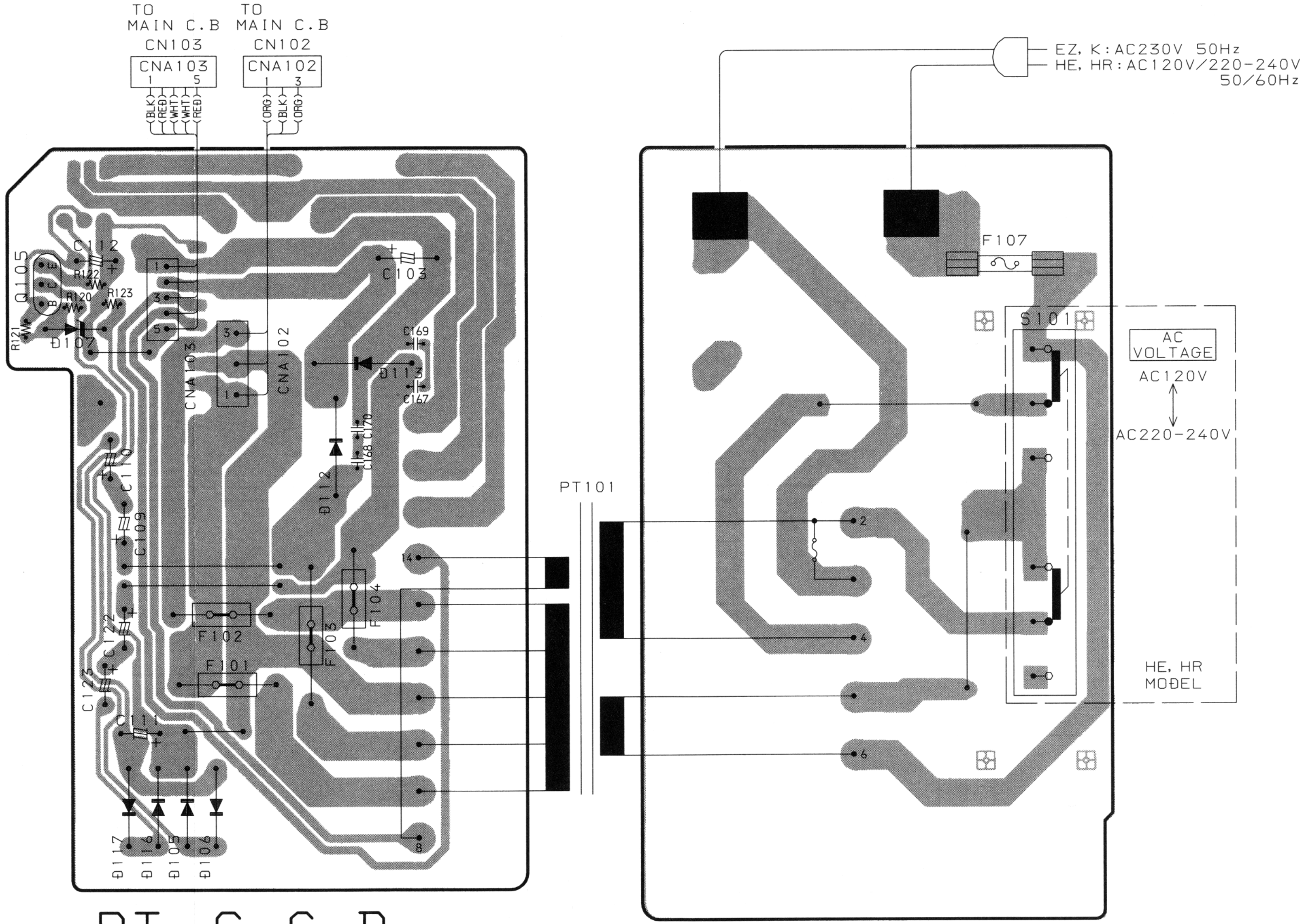
WIRING-5 (DECK/POWER)

ĐECK C.B


SW2 (REC B)
SW6 (CAM)
SW5 (CST)
TO/FROM FRONT C.B
1 3 5 7 9
CN401
SW4 (CrO2)
SW3 (REC A)
PIN1
SFR1
R2
L
H
3
2
1
IC1
SOL1
M1 (ĐECK MOTOR)
<–>
<xxx>
<REĐ>
<WHT>
-
+
H
L
M


<WHT>
<BLK>
<WHT>
<BLK>
<YEL>
<REĐ>
<BLK>
<REĐ>
<REĐ>
<BLK>
<BLK>
<WHT>
<YEL>
<REĐ>
<BLK>
<WHT>
<BLK>
1
3
5
7
CNA301
TO MAIN C.B
PN301
(BLU)
(BRN)
(YEL)
(BLK)
(REĐ)
(WHT)
RPEH

RELAY C.B


TO MAIN C.B
CN103
CNA103
1 5
(BLK) (REĐ) (WHT) (WHT) (REĐ)
TO MAIN C.B
CN102
CNA102
1 3
(ORG) (BLK) (ORG)
Q105
C112
R122
R120
R123
R121
Đ107
C103
C169
Đ113
C167
C168 C170
Đ112
C110
C109
C122
C123
C111
F102
F101
F103
F104
Đ117
Đ116
Đ105
Đ106
PT101
14
2
4
8
6
EZ, K:AC230V 50Hz
HE, HR:AC120V/220-240V 50/60Hz
F107
S101
AC VOLTAGE
AC120V
AC220-240V
HE, HR MOĐEL

PT-S C.B

PT-P C.B

IC DESCRIPTION
IC, LC866448W

Pin No.	Pin Name	I/O	Description
1	O-PLL CE	O	PLL chip enable output.
2	O-F/STB	O	Shift register data latch strobe output.
3	O-M/STB	O	
4	O-DATA	O	PLL, shift register data output.
5	O-CLK	O	PLL, shift register clock output.
6	O-SHIFT	O	Clock shift output.
7	RESET	I	Microprocessor reset.
8	I-STEREO	I	Tuner Stereo detection.
9	I-TUNE/IFC	I	PLL, data output.
10	VSS1	—	GND.
11	CF1	I	Connected to 5.76 MHz oscillator.
12	CF2	O	
13	VDD1	—	Power supply of microprocessor (μ-com5V).
14, 15	I-KEY0, I-KEY1	I	Key AD input.
16	I-ENC1	I	Encoder A, B status detection input.
17	I-ENC2	I	
18	I-CD SW	I	CD door status detection input.
19	I-D SW	I	DECK REC status detection input.
20	I-SIG/I-MS	I	RDS signal level input.
21	I-RD/DATA	I	RDS data output.
22	I-RD/CLK/I-DRF	I	Clock output/RF detection result output.
23	I-AC OFF	I	HOLD status detection input.
24	I-RMC	I	Remote control input.
25-35	G1-G11	O	FL tube grid output.
36	N.C	—	—
37-40	P1-P4	O	FL tube anode output.
41	VDD2	—	Power supply of microprocessor (μ-com5V).
42	VP	—	Negative (-) power supply for FL tube.
43-46	P5-P8	O	FL tube anode output.
47	P9	O	FL tube anode output & initialize input.
48-51	P10-P13	O	FL tube anode output.
52	P14	O	FL tube anode output & Initial input.
53-58	P15-P20	O	FL tube anode output.
59	P21	O	FL tube anode output & initialize input.
60	P22	O	FL tube anode output.
61	O-CLOSE	O	CD door CLOSE control output.
62	O-OPEN	O	CD door OPEN control output.
63	O-KEY SC	O	Initial diode matrix detection timing.
64	O-BBE B	O	BBE control output.
65	O-POWER	O	Machine's power control output.
66	O-MOTOR	O	DECK motor power control output.

Pin No.	Pin Name	I/O	Description
67	O-$\overline{\text{PL}}$	O	DECK plunger solenoid control output.
68	O-MUTE	O	Mute output.
69	I-AS	I	DECK auto pulse input.
70	I-STOP	I	DECK stop input.
71	I-MS	I	DECK music sensor input.
72	I-TM BASE	I	Reference clock input for watch.
73	VSS2	—	GND.
74	O-COIN	O	DSP command output.
75	I-SQ OUT	I	Subcode Q data.
76	O-CQCK	O	DSP command/Subcode clock.
77	O-WRC	O	DSP command/Sub Q data read end.
78	I-WRQ	I	Sub Q data read request.
79	O-BBE A	O	BBE control output.
80	O-VOL	O	VOL, EQ control output.

IC, LA9241M

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	NC	—	No connection.
24	SP	O	Single ended output of the CV+ and CV– pin input signal.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	"High Frequency Level" is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS–	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	"Slice Level Control" is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	"Tracking Balance Control" EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	"Detect RF" RF level detector output.
55	FSS	I	"Focus Search Select" focus search mode (± search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622E

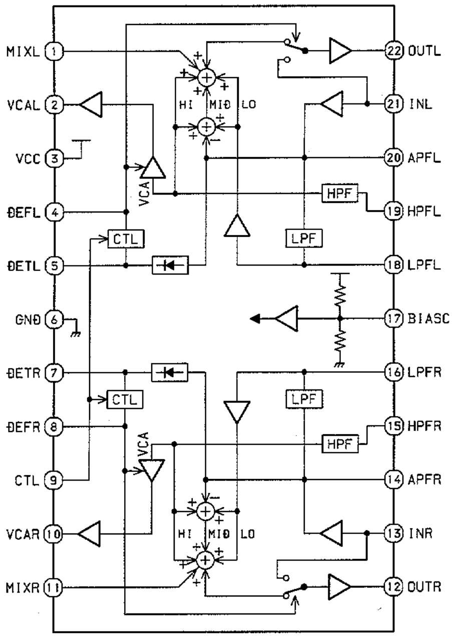
Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	TEST2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK–	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24-28	CONT1-CONT5	I/O	General purpose input/output pin 1 to 5.	The pin is controlled by the serial data command from microprocessor. When the pin is not used, set the pin to the input terminal and connect to 0V, or alternately set the pin to output terminal and leave the pin open.
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	TEST3, TEST4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	$\overline{\text{RES}}$	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	TST11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	TEST5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	TEST1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

Note: The same potential must be applied to the respective power supply terminals. (VDD, VVDD, LVDD, RVDD, XVDD)

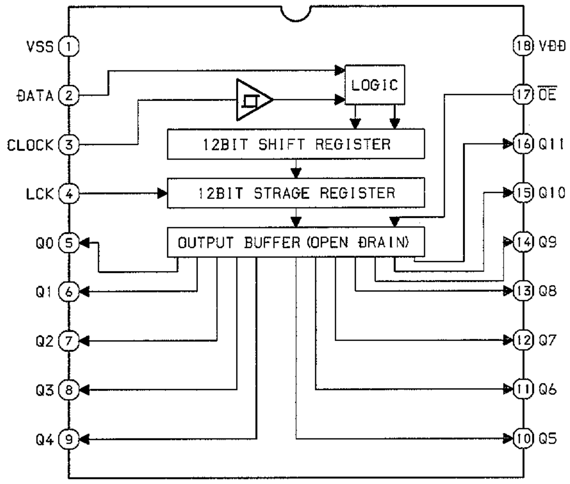
IC BLOCK DIAGRAM

IC, BA3880S



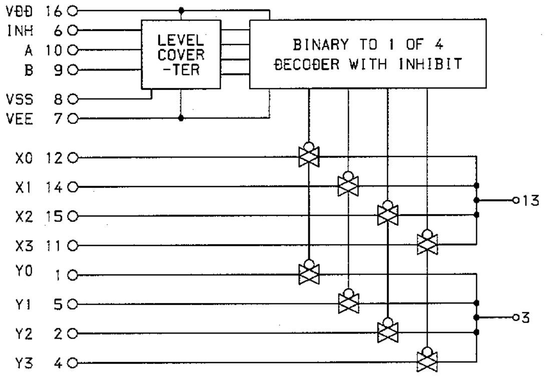
MIXL 1
VCAL 2
VCC 3
ĐEFL 4
ĐETL 5
GNĐ 6
ĐETR 7
ĐEFR 8
CTL 9
VCAR 10
MIXR 11
22 OUTL
21 INL
20 APFL
19 HPFL
18 LPFL
17 BIASC
16 LPFR
15 HPFR
14 APFR
13 INR
12 OUTR
HI
MIĐ
LO
VCA
HPF
LPF
CTL

IC, BU2092F



VSS 1
DATA 2
CLOCK 3
LCK 4
Q0 5
Q1 6
Q2 7
Q3 8
Q4 9
18 VDD
17 OE
16 Q11
15 Q10
14 Q9
13 Q8
12 Q7
11 Q6
10 Q5
LOGIC
12BIT SHIFT REGISTER
12BIT STRAGE REGISTER
OUTPUT BUFFER (OPEN ĐRAIN)

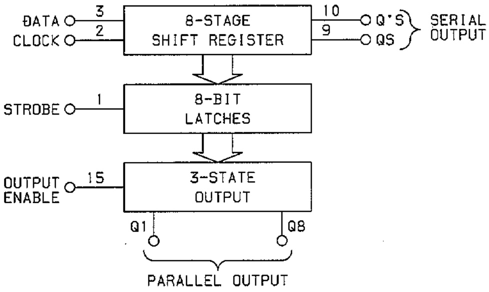
IC, BU4052BCF



VĐĐ 16
INH 6
A 10
B 9
VSS 8
VEE 7
X0 12
X1 14
X2 15
X3 11
Y0 1
Y1 5
Y2 2
Y3 4
13
3
LEVEL COVER -TER
BINARY TO 1 OF 4 ĐECOĐER WITH INHIBIT

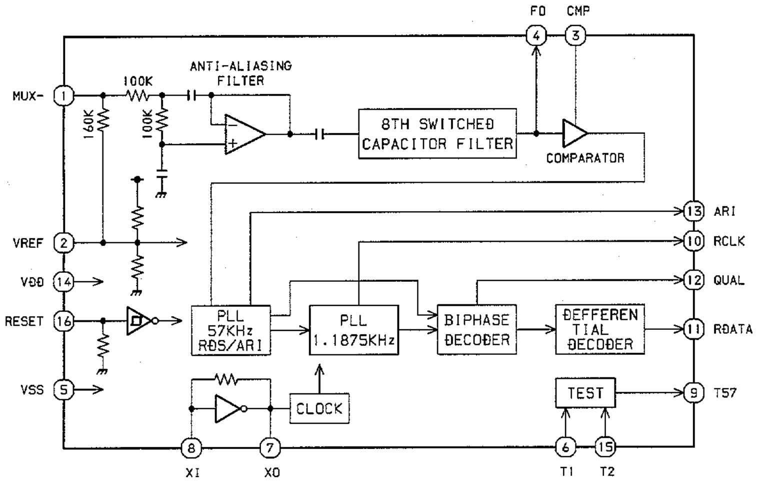
TRUTH TABLE

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE



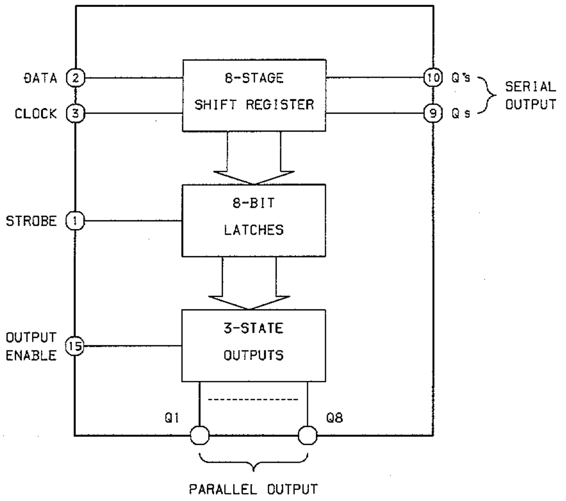
ĐATA 3
CLOCK 2
8-STAGE SHIFT REGISTER
10 Q'S
9 QS
SERIAL OUTPUT
STROBE 1
8-BIT LATCHES
OUTPUT ENABLE 15
3-STATE OUTPUT
Q1
Q8
PARALLEL OUTPUT

IC, BU1920FS



FO
CMP
MUX- 1
100K
160K
100K
ANTI-ALIASING FILTER
8TH SWITCHEĐ CAPACITOR FILTER
COMPARATOR
13 ARI
10 RCLK
12 QUAL
11 RĐATA
9 T57
VREF 2
VĐĐ 14
RESET 16
VSS 5
PLL 57KHz RĐS/ARI
PLL 1.1875KHz
BIPHASE ĐECOĐER
ĐEFFEREN TIAL ĐECOĐER
CLOCK
TEST
8 XI
7 XO
6 T1
15 T2

IC, BU4094BF


DATA 2
CLOCK 3
STROBE 1
OUTPUT ENABLE 15
8-STAGE SHIFT REGISTER
8-BIT LATCHES
3-STATE OUTPUTS
10 Q's
9 Qs
SERIAL OUTPUT
Q1
Q8
PARALLEL OUTPUT

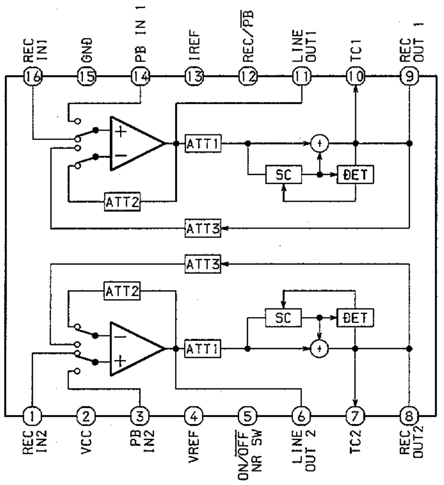
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Q7	NO Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↑	H	H	H	H	Qn-1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance

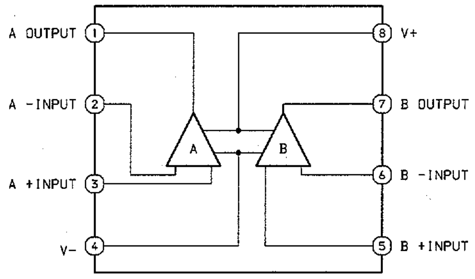
X=Don't Care

IC, CXA1553P

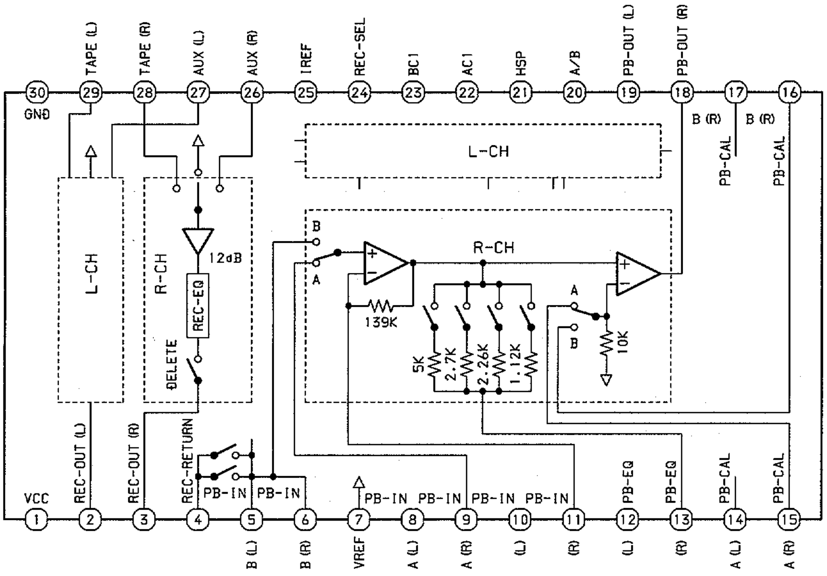

REC IN1 16
GND 15
PB IN 1 14
IREF 13
REC/PB 12
LINE OUT1 11
TC1 10
REC OUT 1 9
ATT1
ATT2
ATT3
SC
DET
REC IN2 1
VCC 2
PB IN2 3
VREF 4
ON/OFF NR SW 5
LINE OUT 2 6
TC2 7
REC OUT2 8

ATT:Attenuator
SC:Side Chain
DET:Detector

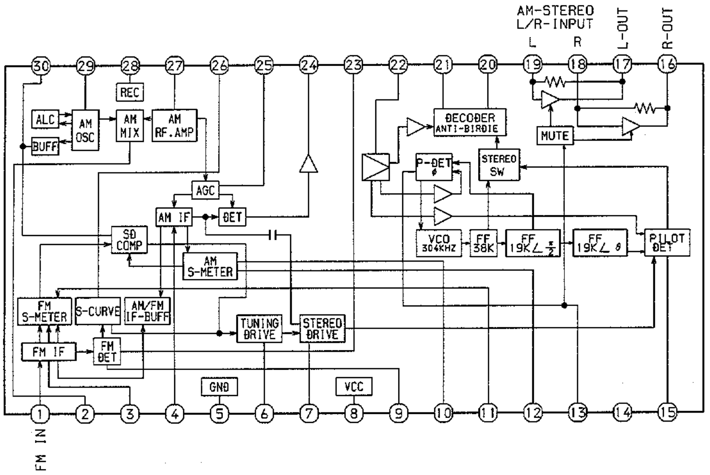
IC, NJM4558M


A OUTPUT 1
A -INPUT 2
A +INPUT 3
V- 4
8 V+
7 B OUTPUT
6 B -INPUT
5 B +INPUT
A
B

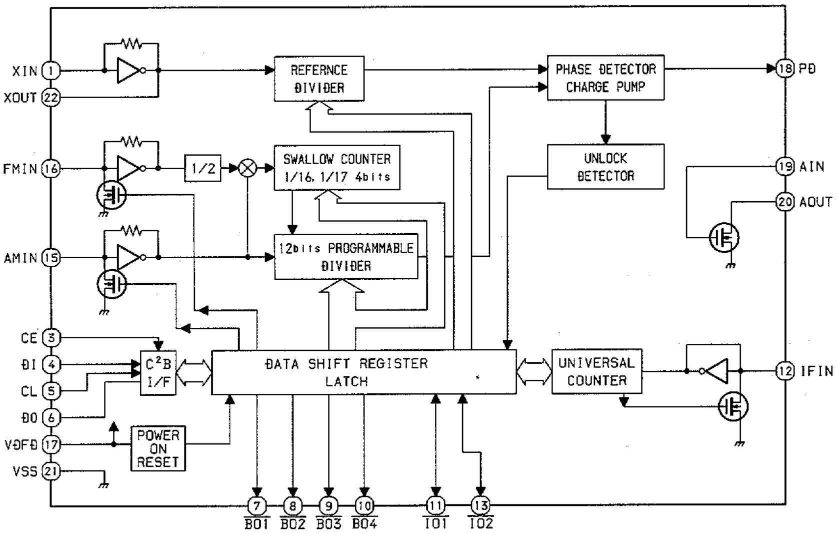
IC, HA12211NT


30 GND
29 TAPE (L)
28 TAPE (R)
27 AUX (L)
26 AUX (R)
25 IREF
24 REC-SEL
23 BC1
22 AC1
21 HSP
20 A/B
19 PB-OUT (L)
18 PB-OUT (R)
17 B (R) PB-CAL
16 B (R) PB-CAL
L-CH
R-CH
12dB
REC-EQ
DELETE
L-CH
R-CH
B
A
139K
5K
2.7K
2.26K
1.12K
A
B
10K
1 VCC
2 REC-OUT (L)
3 REC-OUT (R)
4 REC-RETURN
5 PB-IN B (L)
6 PB-IN B (R)
7 VREF
8 PB-IN A (L)
9 PB-IN A (R)
10 PB-IN (L)
11 PB-IN (R)
12 PB-EQ (L)
13 PB-EQ (R)
14 PB-CAL A (L)
15 PB-CAL A (R)

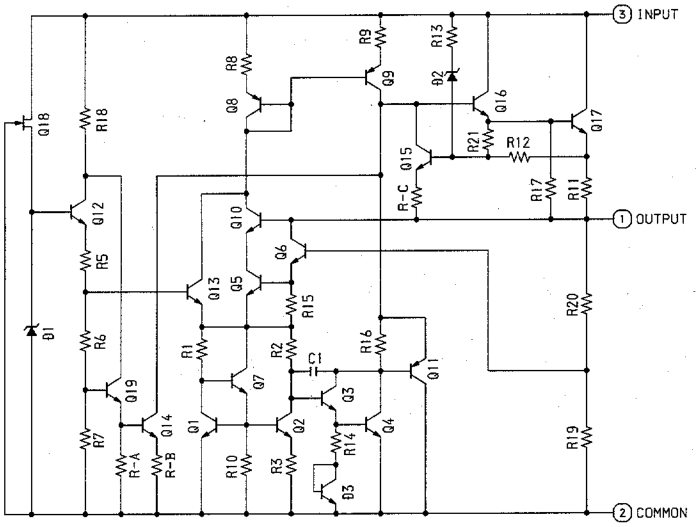
IC, LA1837


AM-STEREO
L/R-INPUT
L
R
L-OUT
R-OUT
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
REC
ALC
AM OSC
AM MIX
AM RF.AMP
BUFF
DECODER ANTI-BIRDIE
MUTE
P-DET
STEREO SW
AGC
AM IF
DET
SD COMP
AM S-METER
VCO 304KHz
FF 38K
FF 19K
FF 19K
PILOT DET
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
STEREO DRIVE
FM IF
FM DET
GND
VCC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
FM IN

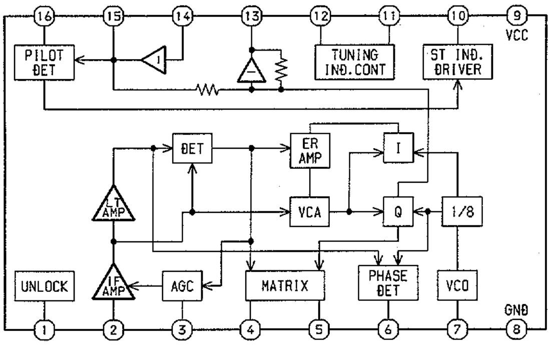
IC, LC72131


XIN 1
XOUT 22
FMIN 16
AMIN 15
CE 3
DI 4
CL 5
DO 6
VDFD 17
VSS 21
REFERNCE DIVIDER
1/2
SWALLOW COUNTER 1/16, 1/17 4bits
12bits PROGRAMMABLE DIVIDER
PHASE DETECTOR CHARGE PUMP
UNLOCK DETECTOR
C²B I/F
DATA SHIFT REGISTER LATCH
POWER ON RESET
UNIVERSAL COUNTER
18 PD
19 AIN
20 AOUT
12 IFIN
7 BO1
8 BO2
9 BO3
10 BO4
11 IO1
13 IO2

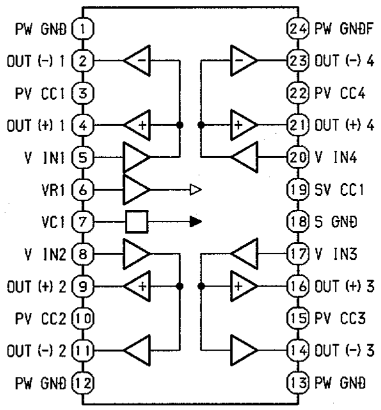
IC, NJM78M05FA


3 INPUT
1 OUTPUT
2 COMMON
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
R1
R2
R3
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R-A
R-B
R-C
C1
D1
D2
D3

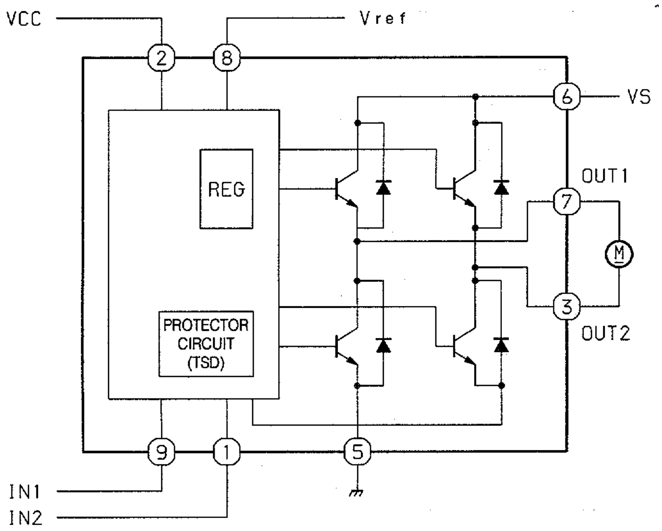
IC, TA2040F


16
15
14
13
12
11
10
9
VCC
PILOT DET
TUNING IND.CONT
ST IND. DRIVER
DET
ER AMP
I
LT AMP
VCA
Q
1/8
UNLOCK
IF AMP
AGC
MATRIX
PHASE DET
VCO
GND
1
2
3
4
5
6
7
8

IC, TA2092


PW GND 1
OUT (-) 1 2
PV CC1 3
OUT (+) 1 4
V IN1 5
VR1 6
VC1 7
V IN2 8
OUT (+) 2 9
PV CC2 10
OUT (-) 2 11
PW GND 12
24 PW GNDF
23 OUT (-) 4
22 PV CC4
21 OUT (+) 4
20 V IN4
19 SV CC1
18 S GND
17 V IN3
16 OUT (+) 3
15 PV CC3
14 OUT (-) 3
13 PW GND

IC, TA7291S

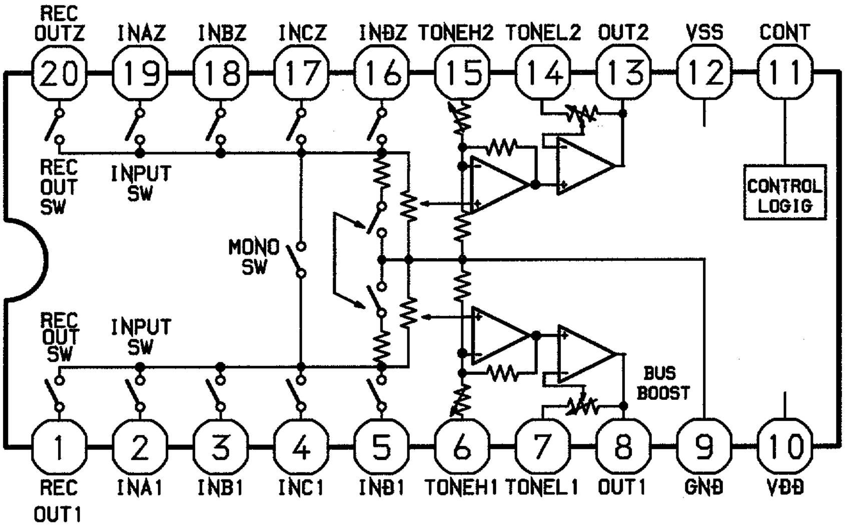

VCC
2
8
Vref
6
VS
REG
OUT1
7
M
3
OUT2
PROTECTOR CIRCUIT (TSD)
9
1
5
IN1
IN2

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE

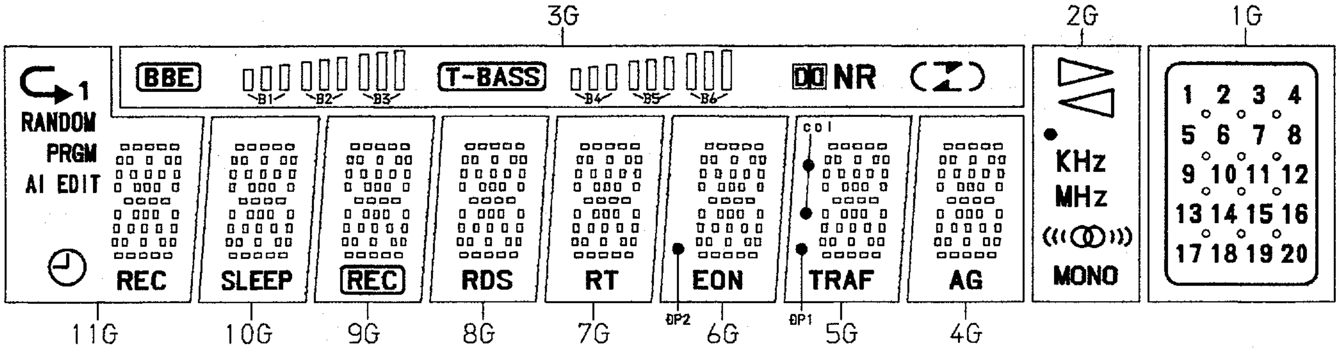
NOTE : INPUT "H" ACTIVE

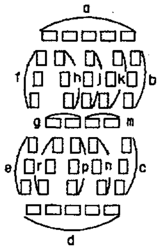
IC, M62439SP


REC OUTZ
INAZ
INBZ
INCZ
INDZ
TONEH2
TONEL2
OUT2
VSS
CONT
20
19
18
17
16
15
14
13
12
11
REC OUT SW
INPUT SW
CONTROL LOGIC
MONO SW
REC OUT SW
INPUT SW
BUS BOOST
1
2
3
4
5
6
7
8
9
10
REC OUT1
INA1
INB1
INC1
IND1
TONEH1
TONEL1
OUT1
GND
VDD

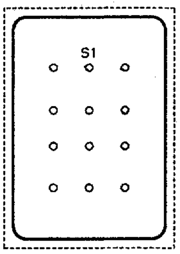
FL (11-BT-162GK) GRID ASSIGNMENT/ANODE CONNECTION

GRID ASSIGNMENT


3G
2G
1G
↪1
RANDOM
PRGM
AI EDIT
BBE
B1
B2
B3
T-BASS
B4
B5
B6
DD NR
KHz
MHz
MONO
col
REC
SLEEP
REC
RDS
RT
EON
TRAF
AG
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
11G
10G
9G
8G
7G
DP2
6G
DP1
5G
4G


a
f
h
j
k
b
g
m
e
r
p
n
c
d

(11G ~ 4G)

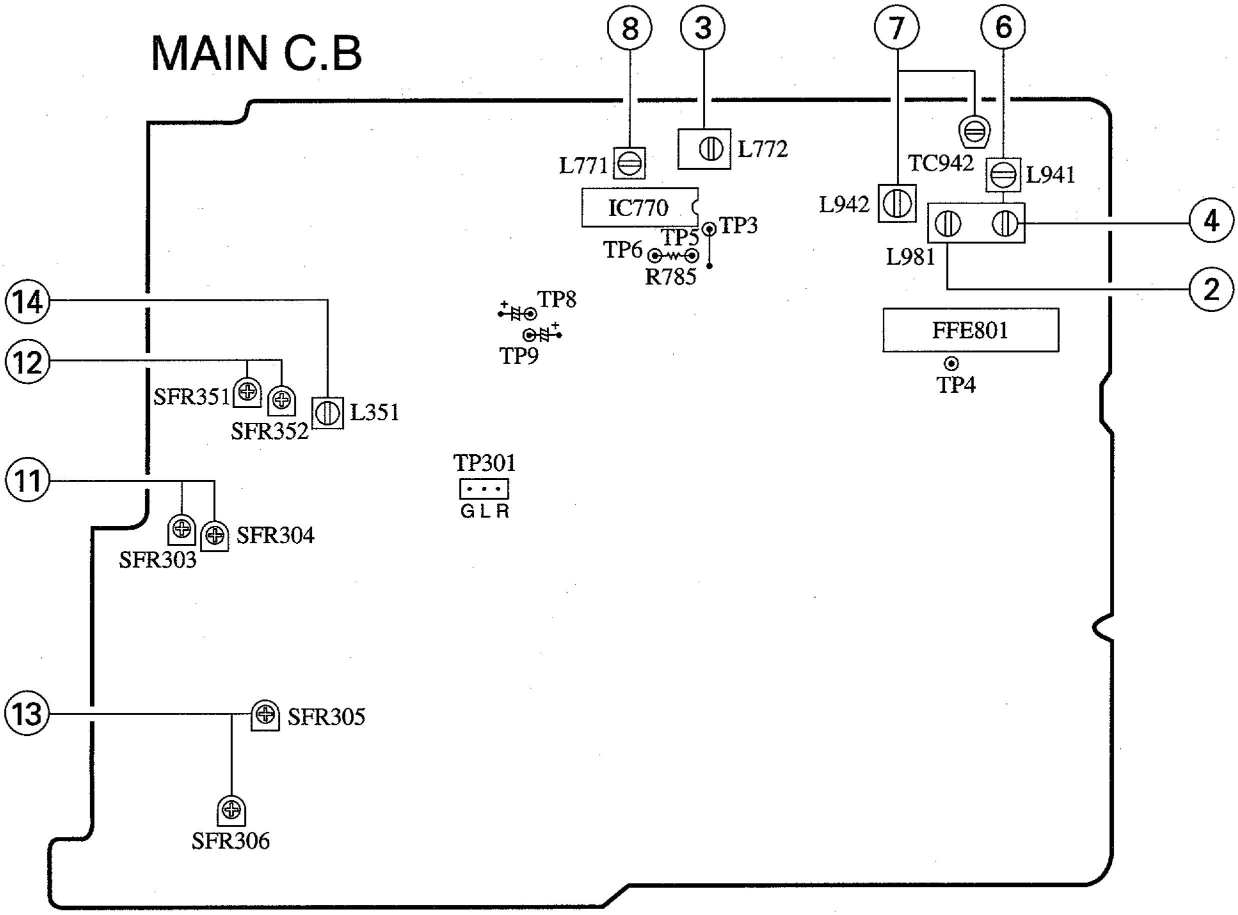


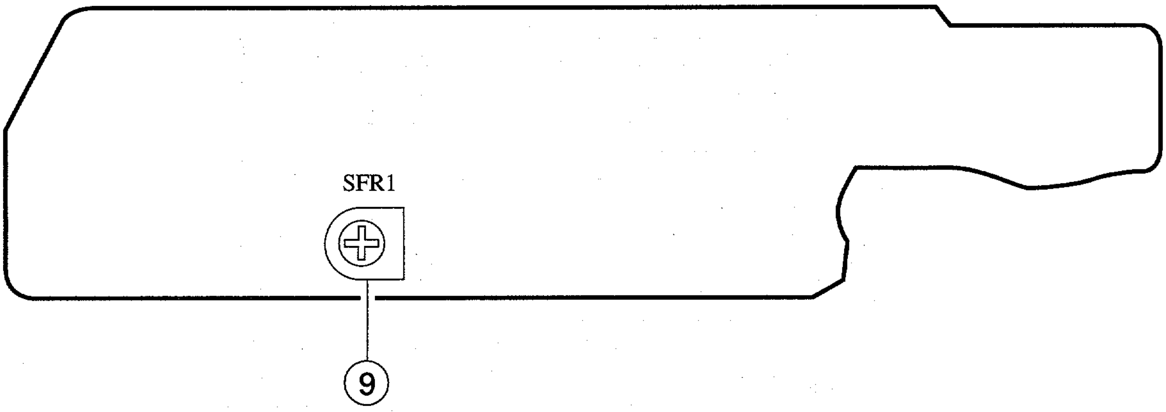
(1G)

ANODE CONNECTION

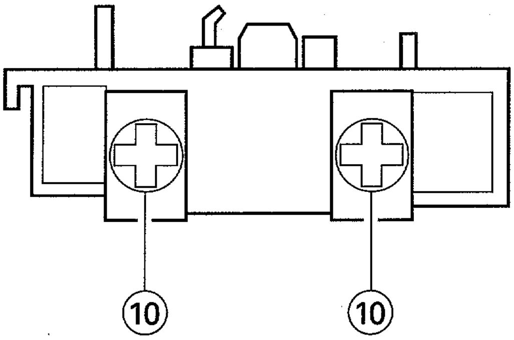
	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	REC	SLEEP	REC	RDS	RT	EON	TRAF	AG	BBE	MONO	20
P2	d	d	d	d	d	d	d	d	B1	((ꝏ))	19
P3	n	n	n	n	n	n	n	n	B2	MHz	18
P4	p	p	p	p	p	p	p	p	B3	KHz	17
P5	r	r	r	r	r	r	r	r	T-BASS	○	16
P6	e	e	e	e	e	e	e	e	B4	◁	15
P7	c	c	c	c	c	c	c	c	B5	▷	14
P8	g	g	g	g	g	g	g	g	B6	–	13
P9	m	m	m	m	m	m	m	m	DD NR	–	12
P10	f	f	f	f	f	f	f	f	(	–	11
P11	b	b	b	b	b	b	b	b	⧗	–	10
P12	k	k	k	k	k	k	k	k	)	–	9
P13	j	j	j	j	j	j	j	j	–	–	8
P14	h	h	h	h	h	h	h	h	–	–	7
P15	a	a	a	a	a	a	a	a	–	–	6
P16	RANDOM	–	–	–	–	–	col (U)	–	–	–	5
P17	🕒	–	–	–	–	–	col (F)	–	–	–	4
P18	1	–	–	–	–	DP2	DP1	–	–	–	3
P19	PRGM	–	–	–	–	–	–	–	–	–	2
P20	AI	–	–	–	–	–	–	–	–	–	1
P21	EDIT	–	–	–	–	–	–	–	–	–	S1
P22	↪	–	–	–	–	–	–	–	–	–	–

MAIN C.B


⑧
③
⑦
⑥
L771
L772
TC942
L941
L942
IC770
TP3
TP5
TP6
R785
L981
④
②
⑭
TP8
TP9
FFE801
TP4
⑫
SFR351
SFR352
L351
TP301
G L R
⑪
SFR303
SFR304
⑬
SFR305
SFR306



R.P.E HEAD



< TUNER SECTION >

1. Clock Frequency Check

Settings:
- Test point: TP3 (CLK IC770 pin30)

Method: Set to MW 1602kHz and check that the test point becomes 2052kHz±45kHz.

2. MW VT Adjustment (HE, HR)

Settings:
- Test point: TP4 (VT)
- Adjustment location: L981

Method: Set to MW 1710kHz and adjust L981 so that the test point is less than 8.5V±0.05V.
Then set to MW 530kHz and check that the test point is more than 0.3V.

2. MW VT Adjustment (K, EZ)

Settings:
- Test point: TP4 (VT)

Method: Set to MW 1602kHz and check that the test point is less than 8.5V.
Then set to MW 531kHz and check that the test point is more than 0.5V.

3. MW IF Adjustment

Settings:
- Test point: TP8, TP9
  L772 .... 450kHz

4. MW Tracking Adjustment

Settings:
- Test point: TP8, TP9
- Adjustment location: L981

Method: Set to MW 999kHz and adjust L981 so that the test point becomes maximum.

5. FM VT Check

Settings:
- Test point: TP4 (VT)

Method: Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.5V (108.0MHz).

6. LW VT Adjustment

Settings:
- Test point: TP2 (VT)
- Adjustment location: L942

Method: Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V±0.05V.
Then set to LW 290kHz and check that the test point is less than 6.0V.

7. LW Tracking Adjustment

Settings:
- Test point: TP8, TP9
- Adjustment location:
  L941 .... 144kHz
  TC942 .... 290kHz

Method: Set up TC942 to center before adjustment.
The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

8. DC Balance/Mono Distortion Adjustment

Settings:
- Test point: TP5, TP6
- Adjustment location: L771
- Input level: 54dB

Method: Set to FM 98.0MHz and adjust L771 so that the voltage between TP5 and TP6 becomes 0V±0.04V.
Next, check that the distortion is less than 1.3%.

< DECK SECTION >

9. Tape Speed Adjustment

Settings:
- Test tape: TTA-100
- Test point: TP301
- Adjustment location: SFR1

Method: Playback the test tape by DECK2 and adjust SFR1 so that the frequency counter reads 3000Hz±5Hz. Check that the counter reading in the REV mode is within the range of ±45Hz of that in the FWD mode.

10. Azimuth Adjustment

Settings:
- Test tape: TTA-300
- Test point: TP301
- Adjustment location: Head azimuth adjustment screw

Method: Playback the 10kHz signal of the test tape and adjust the adjustment screw so that the output becomes the -5dB point below the maximum reading. The adjustment must ends with the clockwise rotation of the adjustment screw. Perform this adjustment in both FWD and REV directions. Fix the adjustment screw with adhesive agent upon completion of adjustment.

11. PB Sensitivity Adjustment

Settings:
- Test tape: TTA-200
- Test point: TP301
- Adjustment location:
  SFR303 (Lch)
  SFR304 (Rch)

Method: Play back the test tape and adjust SFRs so that the output level of the TP301 becomes 245mV.

12. REC/PB Frequency Response Adjustment

Settings:
- Test tape: TTA-602
- Test point: TP301
- Input signal: 1kHz/10kHz (LINE IN)
- Adjustment location: SFR351 (Lch)
  SFR352 (Rch)

Method: Establish the record mode. Input the 1kHz and the 10kHz signals from LINE IN with the input level so that TP301 has the signal level of 12mV. Record the 1kHz and the 10kHz signals, then play them back. Adjust SFR so that the output difference between the 1kHz and the 10kHz signals becomes 0dB±0.5dB.

13. REC/PB Sensitivity Adjustment

Settings:
- Test tape: TTA-602
- Test point: TP301
- Input signal: 1kHz /10kHz (LINE IN)
- Adjustment location: SFR305 (Lch)
  SFR306 (Rch)

Method: Establish the record mode. Input the 1kHz signal from LINE IN with the input level so that TP301 has the signal level of 12mV. Record the 1kHz signal, then play it back. Adjust SFR so that the output level becomes 12mV±0.5dB.

14. Bias OSC Frequency Adjustment

Settings:
- Test tape: TTA-601
- Test point: TP10 (R311)
- Adjustment location: L351

Method: Set to the REC mode. Adjust L351 so that the frequency at TP10 is 85.0kHz±1kHz.

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

(HE, HR MODELS)

<FM SECTION>

IHF Sensitiviy: (THD 3%)	4dB±6dB (at 87.5/98.0MHz) 5dB±6dB (at 108MHz)
Signal to noise ratio:	More than 65dB (at 98.0MHz)
Distortion: (Input: 54dB)	Less than 1.3% (at 98.0MHz)
Stereo separation:	More than 25dB (at 98.0MHz)
Intermediate frequency:	10.7MHz

<MW SECTION>

Sensitivity: (S/N 20dB)	54dB±6dB (at 600kHz) 52dB±6dB (at 1000/1400kHz)
Signal to noise ratio: (Input: 100dB)	41dB±36dB (at 1000kHz)
Distortion:	Less than 1.5% (at 1000kHz)
Intermediate frequency:	450kHz

(K, EZ MODELS)

<FM SECTION>

IHF Sensitiviy: (THD 3%)	-2-14dB (at 87.5/98.0MHz) 0-16dB (at 108.0MHz)
Signal to noise ratio:	More than 60dB (98.0MHz)
Distortion:	Less than 1.3% (98.0MHz)
Stereo separation:	More than 25dB (98.0MHz)
Intermediate frequency:	10.7MHz

<MW SECTION>

Sensitivity: (S/N 20dB)	54dB±6dB (at 600kHz) 52dB±6dB (at 1000/1400kHz)
Signal to noise ratio: (Input: 100dB)	41dB±36dB (at 1000kHz)
Distortion:	Less than 1.5% (at 1000kHz)
Intermediate frequency:	450kHz

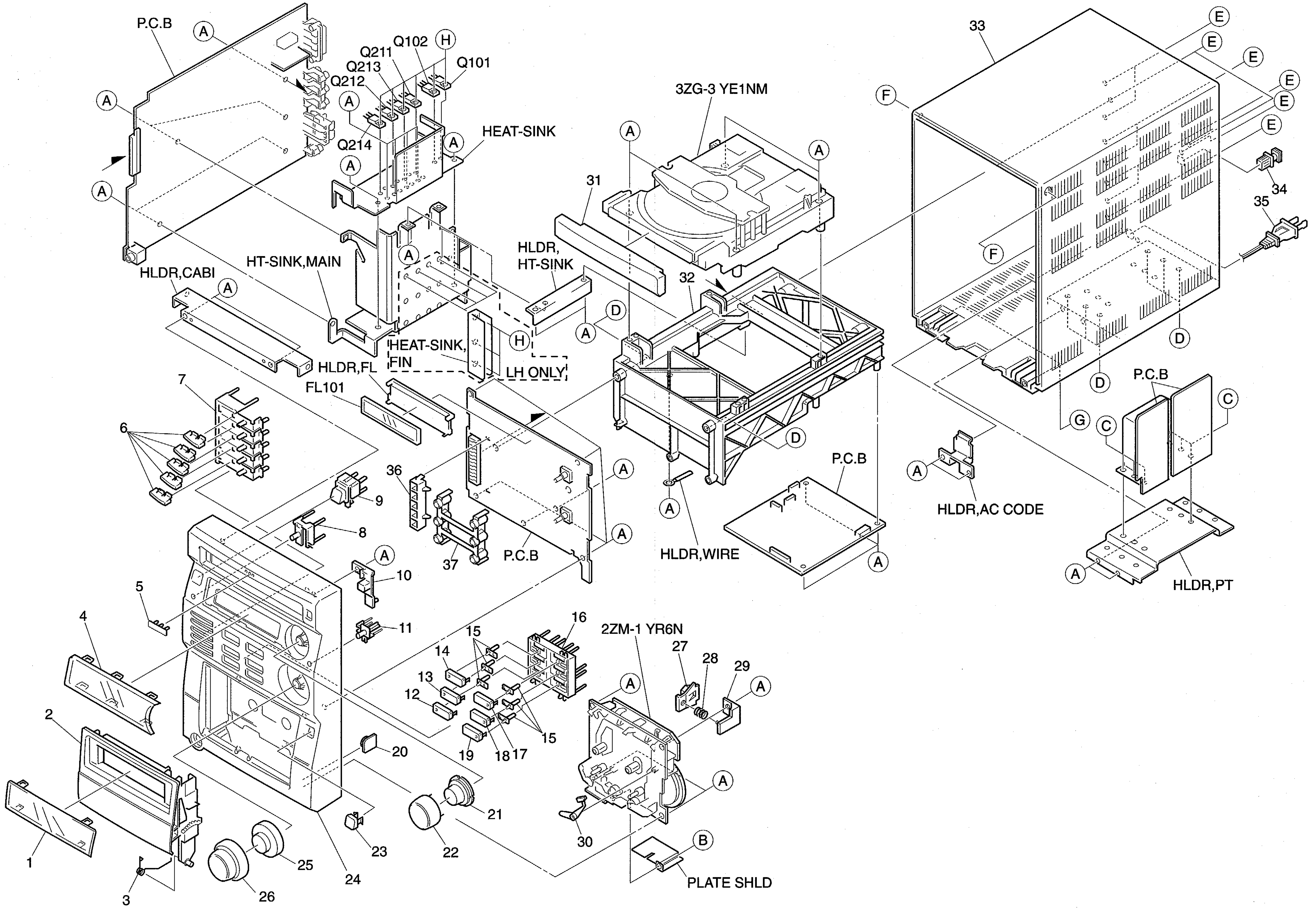
<LW SECTION>

Sensitivity:	64±5dB [at 144kHz] 62±5dB [at 198kHz] 60±5dB [at 290kHz]
Distortion:	Less than 1.8%
Intermediate frequency:	450kHz

< DECK SECTION >

Tape speed:	3000Hz±2.0%	
Wow & flutter: (W.R.M.S)	Less than 0.21%	
Take-up torque:	30-55g-cm (FWD, REV)	
F.F torque:	75-160g-cm	
REW torque:	75-160g-cm	
Back tension:	3±4g-cm (FWD, REV)	
PB Output level:	450mV±2dB (LINE OUT)	
REC/PB Output level:	300mV±2dB (LINE OUT)	
Distortion (REC/PB):	Less than 2% (NORM, CrO_2)	
Noise level (PB):	Less than 3mV (DOLBY NR OFF, NORM) Less than 2mV (DOLBY NR ON, CrO_2)	
Noise level (REC/PB):	Less than 3.2mV (DOLBY NR OFF, NORM) Less than 2.2mV (DOLBY NR ON, CrO_2)	
Erasing ratio:	More than 60dB (125Hz)	
REC bias frequency:	85kHz	
Test tape:	NORMAL	TTA-100 TTA-300 TTA-601 TTA-602
	CrO_2	TTA-200

MECHANICAL EXPLODED VIEW 1/1


P.C.B
A
Q211
Q102
H
Q101
Q213
Q212
Q214
HEAT-SINK
HT-SINK,MAIN
HLDR,CABI
HLDR,
HT-SINK
HEAT-SINK,
FIN
LH ONLY
HLDR,FL
FL101
3ZG-3 YE1NM
31
32
33
34
35
E
F
D
G
C
P.C.B
HLDR,AC CODE
HLDR,PT
HLDR,WIRE
7
6
36
9
8
37
10
11
5
4
2
1
3
26
25
24
23
22
21
20
16
15
14
13
12
19
18
17
2ZM-1 YR6N
27
28
29
30
B
PLATE SHLD

MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

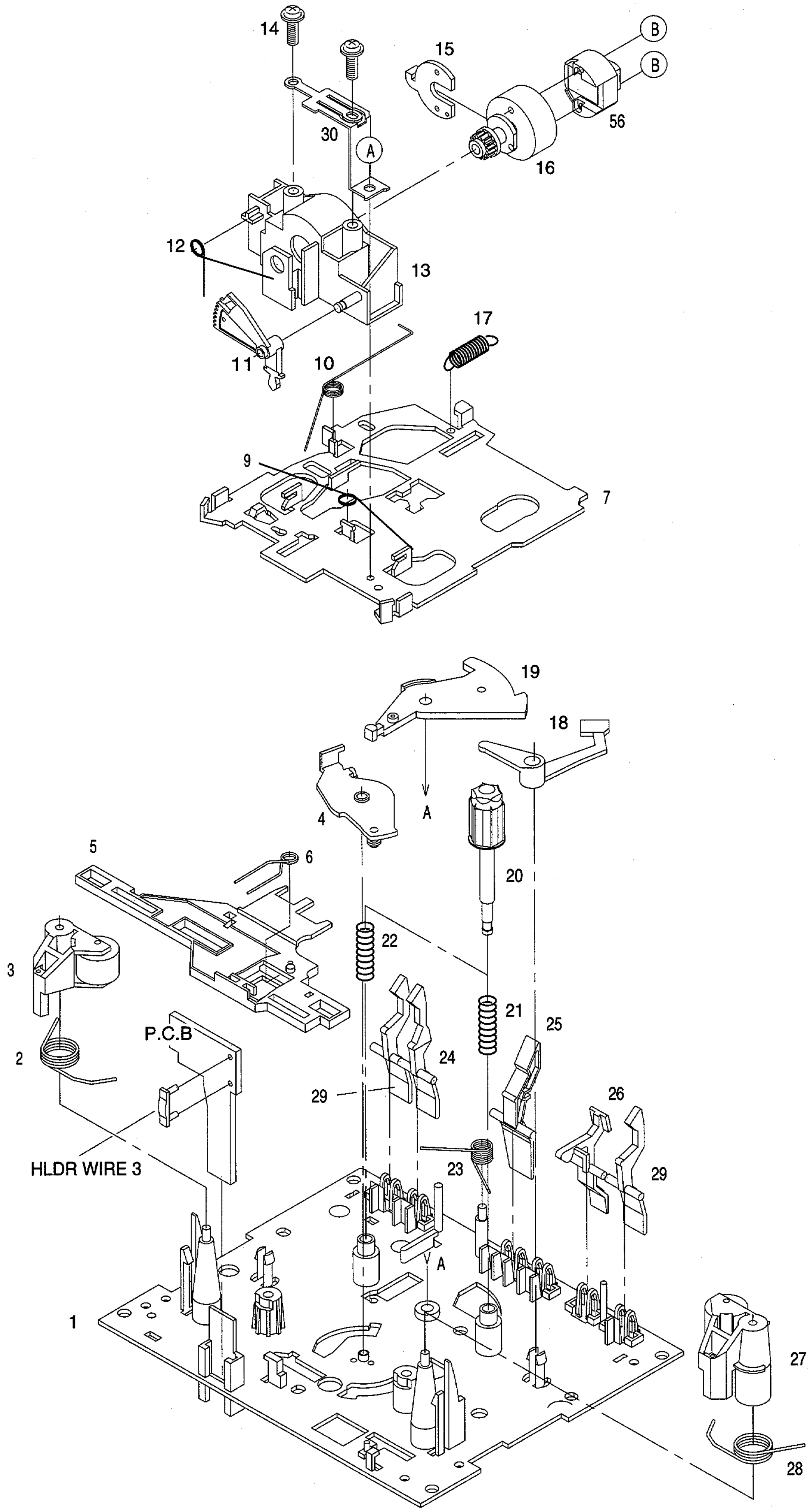
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-CE3-006-010		WINDOW,CASS
2	88-CE3-003-010		BOX,CASS
3	87-CE3-202-010		SPR-T,CASS
4	88-CE3-005-010		WINDOW,DISP
5	87-CE3-023-010		BADGE,AIWA 30N SILV
6	88-CE3-012-010		CAP, FUNC
7	88-CE3-010-010		BTN,FUNC
8	88-CE3-021-010		BTN,DEMO
9	88-CE3-019-010		BTN,POWER
10	88-CE3-020-010		BTN,EJECT
11	88-CE3-022-010		BTN,MODE
12	88-CE3-018-010		CAP, PAUSE
13	88-CE3-016-010		CAP, REW
14	88-CE3-013-010		CAP, STOP
15	88-CE3-007-010		LENS,CONT
16	88-CE3-210-010		BTN,CONT
17	88-CE3-014-010		CAP, PLAY
18	88-CE3-015-010		CAP, FF
19	88-CE3-017-010		CAP, REC
20	87-063-165-010		OIL-DMPR 150
21	88-CE3-209-010		KNOB,RTRY JOG
22	88-CE3-011-010		CAP, JOG
23	88-CE3-008-010		WINDOW,RC
24	88-CE3-001-010		CABI,FR<HE,HR>
24	88-CE3-038-010		CABI,FR EZ<K,EZ>
25	88-CE3-208-010		KNOB,RTRY VOL
26	88-CE3-009-010		CAP, VOL
27	82-NF5-227-010		HLDR,LOCK 2N
28	88-CE3-211-010		SPR-C,LOCK
29	82-NF5-229-010		PLATE,LOCK
30	82-ZM1-264-010		LVR,EJECT R
31	88-CE3-004-010		PANEL,CD
32	88-CE3-201-010		CHAS,CD
33	88-CE3-029-010		CABI,REAR E<K,EZ>
33	88-CE3-028-010		CABI,REAR H<HE,HR>
34	84-ZG1-245-210		CAP,OPTICAL
⚠ 35	87-A80-007-110		AC CORD ASSY,K BLK<K>
⚠ 35	87-050-079-010		AC-CORD ASSY,E<HE,HR,EZ>
36	88-CE3-202-010		GUIDE,FUNC LED
37	88-CE3-203-010		GUIDE,CONT LED
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-571-032-410		VIT+2-3
C	87-067-584-010		TAPPING SCREW, BVT2+3-6
D	87-067-581-010		TAPPING SCREW, BVT2+3-15
E	87-067-761-010		BVT2+3-10 BLK
F	87-744-094-410		UT2+3-6 W/O SLOT CR
G	87-651-104-410		VT1+3-30
H	87-067-579-010		TAPPING SCREW, BVT2+3-8

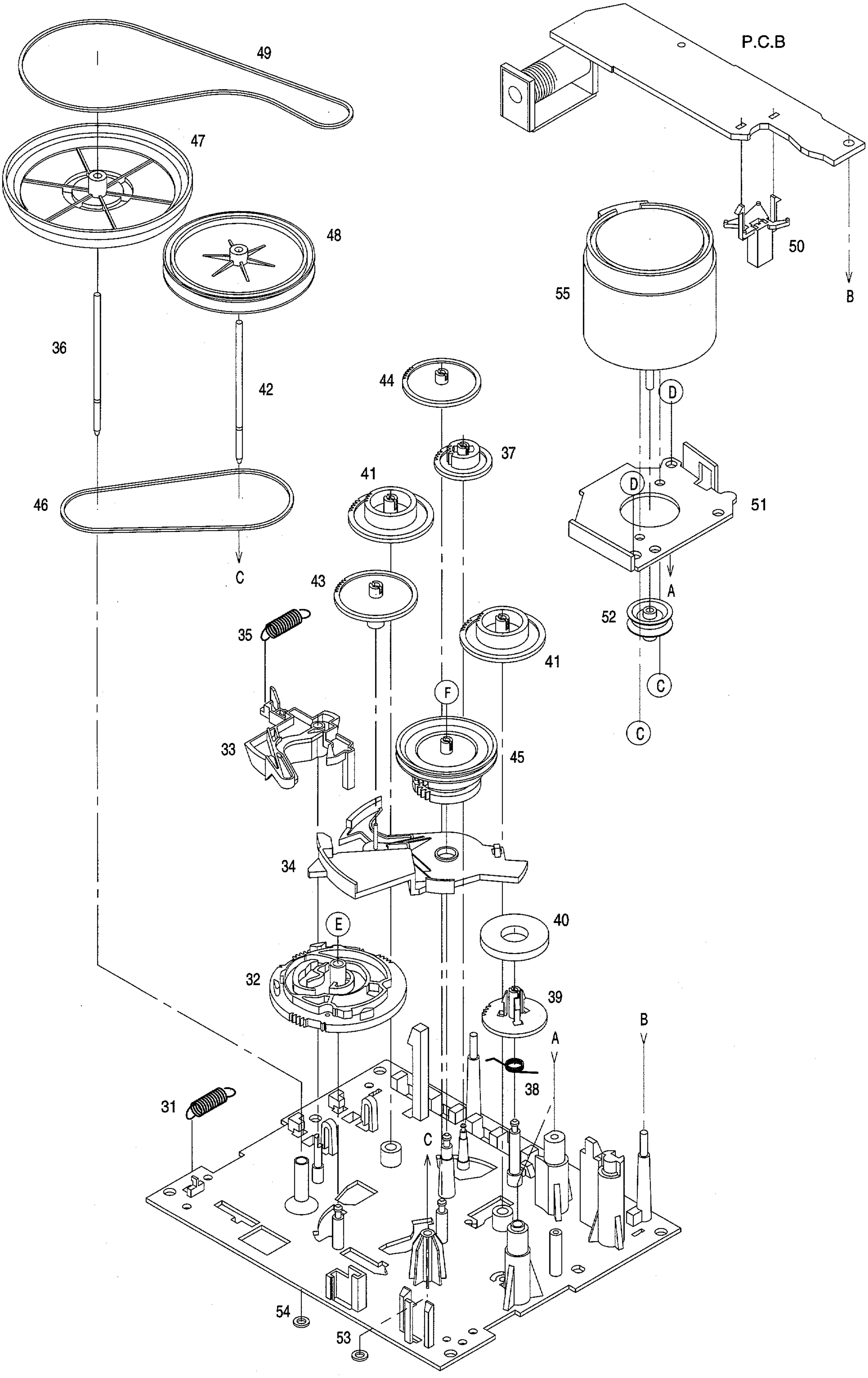
TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-327-210		CHAS ASSY,RN
2	82-ZM1-258-010		SPR-T,PINCH L
3	82-ZM1-341-010		LVR ASSY,PINCH L 2
4	82-ZM1-295-310		PLATE ASSY,LINK
5	82-ZM1-266-110		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-810		CHAS,HEAD
9	82-ZM1-269-210		SPR-T,BRG
10	82-ZM3-323-010		SPR-T,LINK 3
11	82-ZM1-210-110		GEAR,H T
12	82-ZM1-213-010		SPR-T,HEAD
13	82-ZM1-207-610		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-110		HLDR,HEAD
17	82-ZM1-218-010		SPR-E,HB
18	82-ZM1-264-010		LVR,EJECT R
19	82-ZM1-222-210		LVR,PLAY
20	82-ZM1-217-310		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-410		SPR-C,BT L
23	82-ZM1-257-010		SPR-T,CAS
24	82-ZM1-241-310		LVR,MC
25	82-ZM1-242-010		LVR,CAS
26	82-ZM1-243-010		LVR,STOP
27	82-ZM1-344-010		LVR ASSY,PINCH R
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-110		LVR,REC
30	82-ZM1-298-010		SPR-P,EARTH
31	82-ZM1-255-310		SPR-E,LVR DIR
32	82-ZM1-221-110		GEAR,CAM
33	82-ZM1-227-210		LVR,TRIG
34	82-ZM1-224-410		LVR,FR
35	82-ZM1-305-110		SPR-E,TRIG 2
36	82-ZM1-239-010		CAPSTAN 2.2-41.7
37	82-ZM1-223-010		GEAR,PLAY
38	82-ZM1-322-010		SPR-T,FR 60
39	82-ZM1-220-210		GEAR,IDLER
40	82-ZM1-316-010		RING MAGNET 3
41	82-ZM1-216-310		GEAR,REEL
42	82-ZM1-236-010		CAPSTAN,2-41.5
43	82-ZM1-225-010		GEAR,FR
44	82-ZM1-226-010		GEAR,REW
45	82-ZM3-333-210		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT,FR 4
47	82-ZM1-349-010		FLY-WHL,RH
48	82-ZM1-348-010		FLY-WHL,LW
49	82-ZM1-340-010		BEKT,SBU MAIN 2
50	82-ZM1-245-210		HLDR,IC
51	82-ZM1-246-010		HLDR,MOTOR
52	82-ZM1-247-110		PULLEY,MOTOR
53	82-ZM1-288-010		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-010		SH,1.75-3.6-0.5 SLT
55	87-045-347-010		MOT,SHU 2L 70(M1)
56	87-046-399-010		HEAD,RPH YK56R-BS409(RPH)
A	82-ZM1-315-010		S-SCREW,GUIDE TAPE
B	80-ZM6-207-010		V+1.6-7
C	87-251-070-410		U+2.6-3
D	87-741-073-410		UT2+2.6-6 GLD
E	87-B10-008-010		PW,2.15-6.8-0.4 SLT
F	82-ZM3-334-010		PW,2.16-6-0.4

TAPE MECHANISM EXPLODED VIEW 1/1


14
15
B
B
30
A
56
16
12
13
17
11
10
9
7
19
18
A
4
5
6
20
22
3
21
25
P.C.B
24
2
29
26
23
29
HLDR WIRE 3
A
1
27
28


P.C.B
B
D
D
C
A
C
F
C
E
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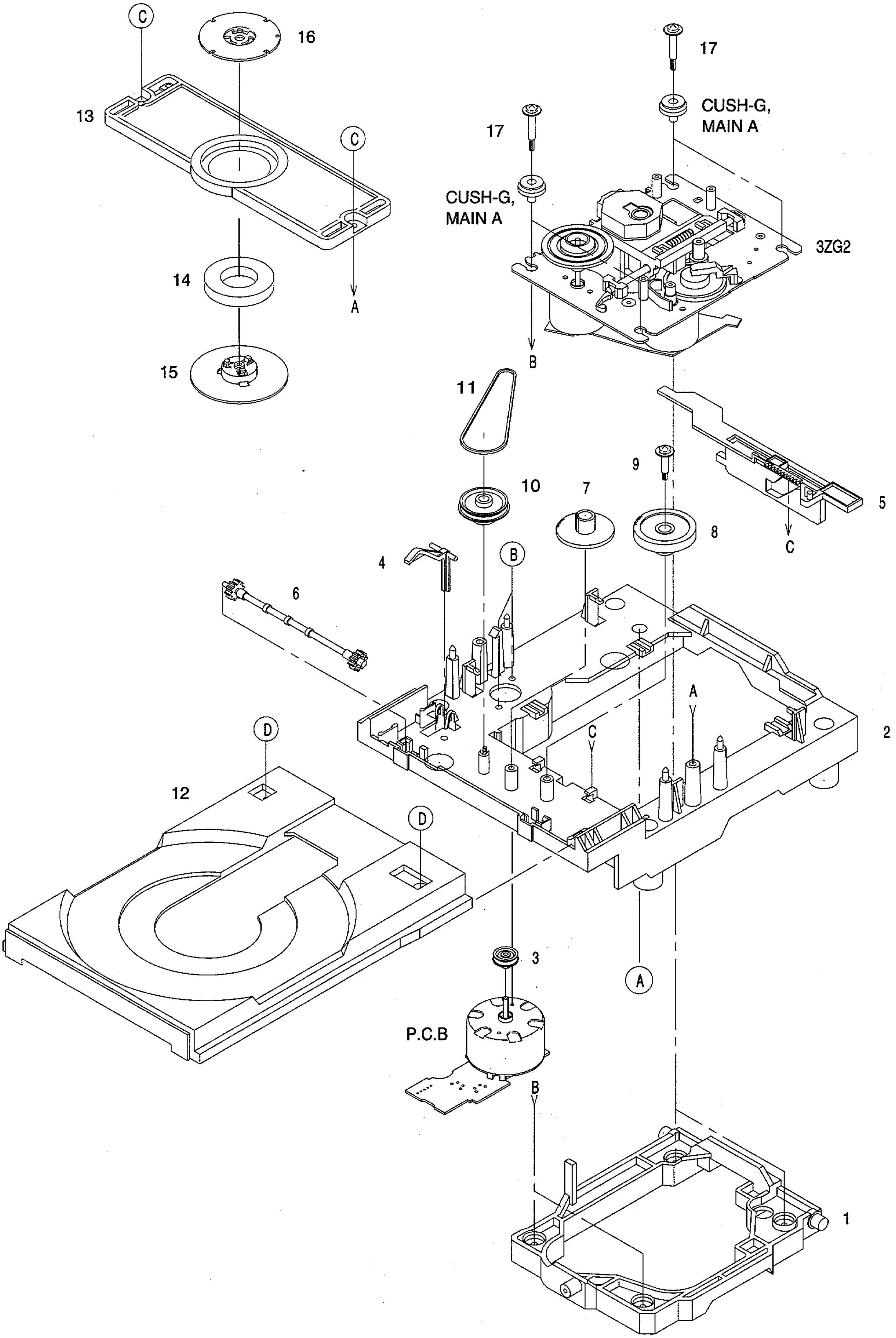
A
C

CD MECHANISM EXPLODED VIEW 1/2

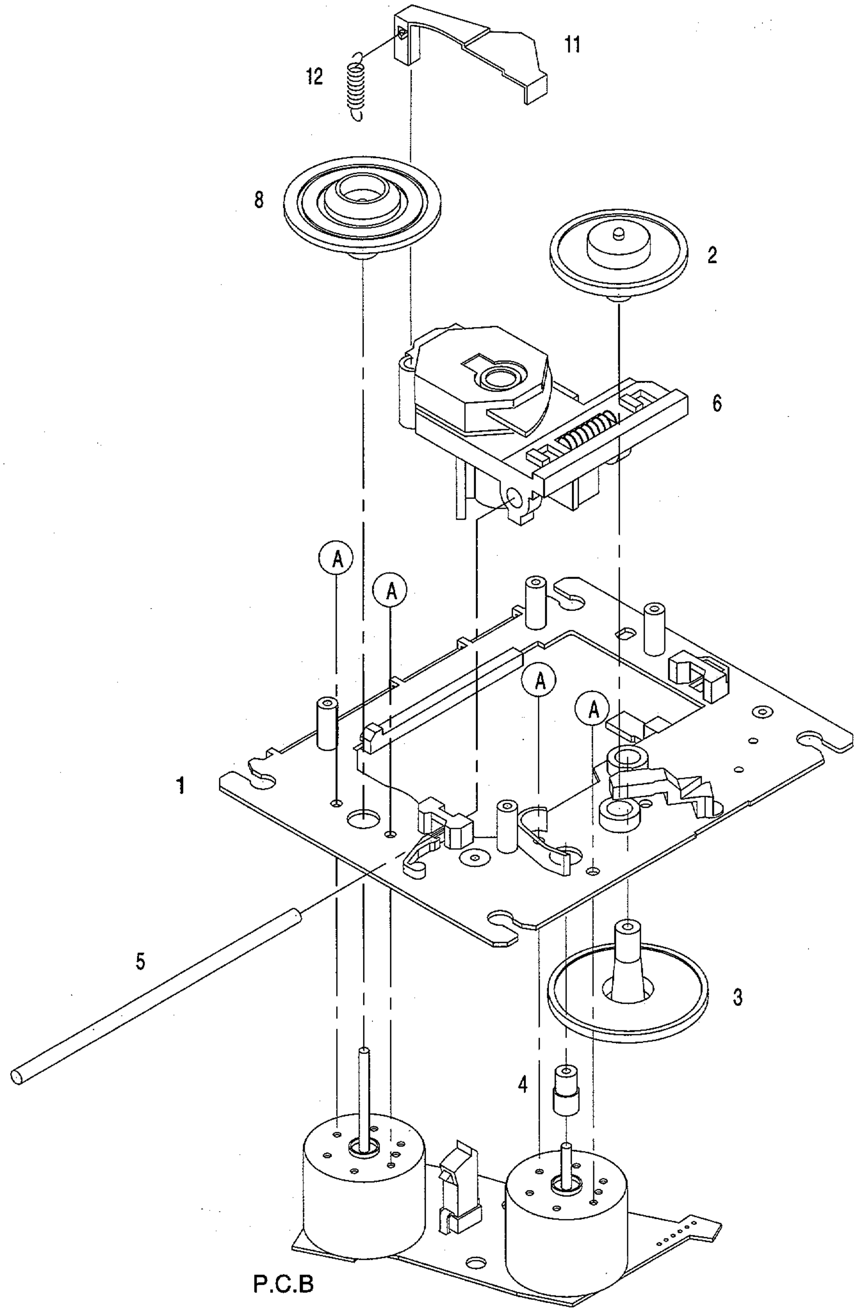

C
16
17
13
C
CUSH-G,
MAIN A
17
CUSH-G,
MAIN A
3ZG2
14
A
B
15
11
9
10
7
5
8
C
4
B
6
A
2
C
D
12
D
3
A
P.C.B
B
1

CD MECHANISM PARTS LIST 1/2

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG3-224-310		HLDR,M2
2	83-ZG3-228-610		CHAS,L6
3	83-ZG3-208-010		PULLEY,MOTOR
4	83-ZG3-213-010		LVR,SW
5	83-ZG3-209-610		CAM,SLIDE
6	83-ZG3-207-010		GEAR,TRAY
7	83-ZG3-204-210		GEAR,C
8	83-ZG3-205-010		GEAR,D
9	83-ZG3-217-010		S-SCREW,GEAR D
10	83-ZG3-220-210		GEAR,PULLEY 2
11	83-ZG3-214-010		BELT,L
12	83-ZG3-229-410		TRAY,CD 2
13	83-ZG3-230-010		HLDR,CHUCK 2
14	83-ZG3-602-010		RING,MAG
15	83-ZG3-212-010		CAP,DISC
16	83-ZG3-219-010		PLATE,CLAMP
17	81-ZG1-254-010		S-SCEW,MECH HLDR
A	87-067-945-110		VFT2+3-12(F10)
B	87-251-071-110		U+2.6-4
C	87-512-074-210		VFT2+2.6-8
D	87-352-075-210		VT2+2.6-10

CD MECHANISM EXPLODED VIEW 2/2

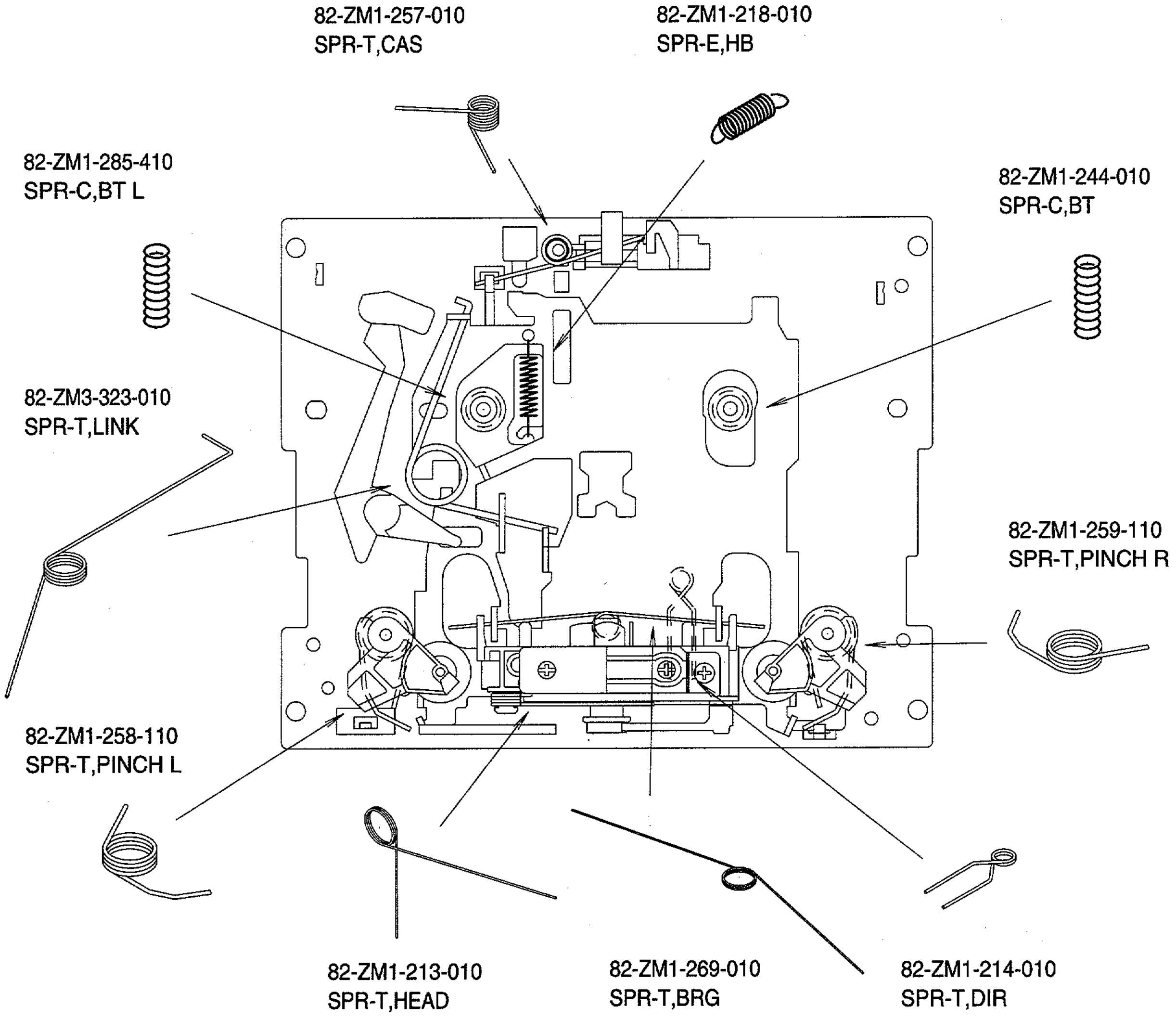


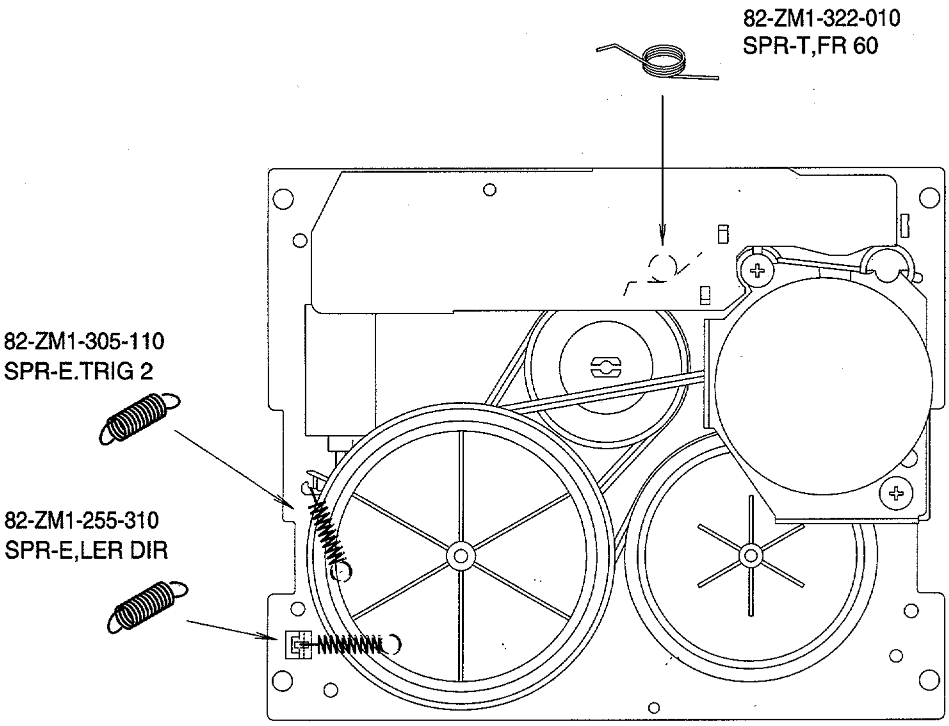
CD MECHANISM PARTS LIST 2/2

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

SPRING APPLICATION POSITION


82-ZM1-257-010
SPR-T,CAS
82-ZM1-218-010
SPR-E,HB
82-ZM1-285-410
SPR-C,BT L
82-ZM1-244-010
SPR-C,BT
82-ZM3-323-010
SPR-T,LINK
82-ZM1-259-110
SPR-T,PINCH R
82-ZM1-258-110
SPR-T,PINCH L
82-ZM1-213-010
SPR-T,HEAD
82-ZM1-269-010
SPR-T,BRG
82-ZM1-214-010
SPR-T,DIR


82-ZM1-322-010
SPR-T,FR 60
82-ZM1-305-110
SPR-E.TRIG 2
82-ZM1-255-310
SPR-E,LER DIR

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-CL3-901-010		IB,H(ECA)C<HE,HR>
1	88-CL3-905-010		IB,K(E)C<K>
1	88-CL3-906-010		IB,E(9L)C<EZ>
2	88-CL4-951-010		RC UNIT,RC-8AT02
3	87-A90-030-010		ANT,LOOP AM-NC C
4	87-043-106-010		WIRE, FM ANT (Z)<K,EZ>
4	87-043-115-010		ANT,FEEDER FM<HE,HR>
5	87-A90-312-010		PLUG,CONVERSION WTN-1157R1<HE,HR>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
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